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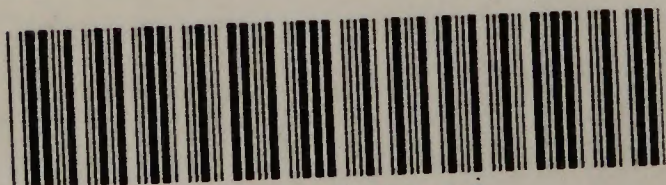
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THE DUBLIN
QUARTERLY JOURNAL
OF
MEDICAL SCIENCE;

CONSISTING OF

ORIGINAL COMMUNICATIONS,
REVIEWS, RETROSPECTS, AND REPORTS,

INCLUDING THE

LATEST DISCOVERIES IN MEDICINE, SURGERY, AND THE COLLATERAL SCIENCES.

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THE DUBLIN QUARTERLY JOURNAL

OF

MEDICAL SCIENCE.

AUGUST 1, 1847.

PART I.

ORIGINAL COMMUNICATIONS.

ART. I.—*Some Particulars respecting Swift and Stella, with Engravings of their Crania; together with some Notice of St. Patrick's Hospital.* By W. R. WILDE, M. R. I. A., with Communications from Dr. MACKENZIE and Mr. HAMILTON.

(Continued from page 434 of Journal for May.)

BEFORE we enter upon the consideration of those most interesting inquiries of Dr. Mackenzie, with which our former article commenced, we beg to lay before our readers the following account of the SECOND *post mortem* examination of the Dean's head, on its exhumation in 1835. About the beginning of the last century, "the frequency of floods in the Poddle river, and the insufficiency of sewers to carry off the superabundant water, was the occasion of much injury to the building" (St. Patrick's Cathedral), "and moreover rendered it, on account of damp, unsafe to assemble in." (a) Now one of

the last public acts of the Dean, before his illness, was having measures taken by the Chapter to prevent this dampness and these inundations; and it is remarkable that their continuance in the year 1835 was the cause of his remains being disturbed. The repairs then necessary were, we are happy to add, the *sole* cause of these sacred relics being again exposed.

“ In making some alterations in the aisle of the church, it became necessary to expose *several* coffins, and amongst others those of Swift and Stella, which lay side by side. It was no idle curiosity, neither can we boast of its being zeal for the cause of science, which led to the disinterment; it was purely a matter of accident.”(a) The circumstance becoming known to a few scientific gentlemen in this city, several persons were present at the disinterment, and, among the rest, the late Dr. Houston, who has given the following interesting account of what took place. “ The coffin,” which was of solid oak, and placed transversely beneath the pillar supporting the tablet erected to his memory, and bearing the celebrated and well-known inscription, written by himself, “ lay about two feet and a half below the flags; it was surrounded by wet clay, and nearly filled with water.”(b) It would occupy more space than this portion of the subject demands, to enter into the question of the identity of the coffin and its contents. We have thoroughly examined into the matter, and the evidence in favour of the skull being that of Swift is, to our minds, conclusive. We have some additions to make to this evidence further on. Besides the positive appearances on the plate of the coffin, &c., of St. Patrick, &c. By William Monck Mason, Esq. 4to. Dublin, 1820. Page 407.

(a) See a letter from the late Dr. Houston, “ On the Authenticity of the Skulls of Dean Swift and Stella,” in the *Phrenological Journal and Miscellany*, vol. ix. p. 604.

(b) Was it a presentiment of this that caused the Dean to request of Mrs. Whiteway that his body should be deposited “ in any *dry* part of the Cathedral?”

which then presented, we may remark, that Richard Brennan, the faithful and attached servant of Swift, and who was present both at the *post mortem* examination and the interment, became, after the death of his master, beadle or sexton to the Cathedral; and he had transmitted to his successor, the late Mr. Maguire, many particulars regarding the Dean, among the rest the fact of his head having been opened by the surgeons, “to ascertain the cause of his insanity.”

This story, related by Mr. Maguire, before opening the coffin, excited considerable interest, though the persons of any reading who were present should have been aware of the fact of the examination of the head the day after his death; but phrenology, not pathology, was then the all-absorbing subject which moved those engaged in this investigation.

“All the bones of the skeleton,” says Dr. Houston, “lay in the position into which they had fallen when deprived of the flesh that enveloped and held them together. The skull, with the calvarium by its side, lay at the top of the coffin; the bones of the neck lay next, and mixed with them were found the cartilages of the larynx, which by age had been converted into bone. All the rings of the trachea, which had undergone the same change, were equally in a state of preservation and order. The dorsal vertebræ and ribs occupied the middle of the coffin; the bones of the arms and hands lay, as they had been placed in death, along the sides; and the pelvis and lower extremities were found towards the bottom. The teeth were nearly all gone, and their sockets were filled up with bone. Six of the middle dorsal vertebræ, and three of the lumbar, were joined together by ankylosis. Several of the ribs were united to the sternum by ossification of the intermediate cartilages. The whole were evidently the remains of a very aged man. The bones were all clean, and in a singularly perfect state of preservation. When first removed, they were nearly black; but on being dried they assumed a brownish colour. The water in which they were immersed was remarkably free from putre-

faction ; even the wood of the coffin was perfectly sound and unbroken."

The British Association were, at this very time, meeting in Dublin, and the skulls of Swift and Stella were then removed, for the purpose of being phrenologically examined by the corps of phrenologists that used to follow in the wake of that learned body : on this, however, hereafter. During the week or ten days which elapsed before they were returned (for returned they certainly were(*a*)), they were carried to most of the learned, as well as all the fashionable societies of Dublin. The University, where Swift had so often toiled, again beheld him, but in another phase ; the Cathedral which heard his preaching, —the Chapter-house which echoed his sarcasm,—the Deanery which resounded with his sparkling wit, and where he gossiped with Sheridan and Delany,—the lanes and alleys which knew his charity,—the squares and streets where the people shouted his name in the days of his unexampled popularity, —the mansions where he was the honoured and much-sought guest,—perhaps the very rooms he often visited,—were again occupied by the dust of Swift !

While these skulls of Swift and Stella were going the rounds, casts and drawings of them were made, from which we now afford our readers the engravings which accompany this essay. Moreover, that of the Dean was also examined, with a view to the elucidation of the malady under which he so long laboured, and of which he died.

Dr. Houston continues : " It is my opinion, that the bones cannot be regarded as free from indications of previous chronic disease. There are certainly no marks of caries or of fungous growths on any part of the head ; but the condition of the cerebral surface of the whole of the frontal region is evidently of a character indicating the presence, during life-time, of diseased

(*a*) The only portion not returned was the larynx, the ossified fragments of which were abstracted by a bystander, and are now in the city of New York, U. S.

action in the subjacent membranes of the brain. The skull in this region is thickened, flattened, and unusually smooth and hard in some places, whilst it is thinned and roughened in others. The marks of the vessels on the bone exhibit, moreover, a very unusual appearance; they look more like the imprints of vessels which had been generated *de novo*, in connexion with some diseased action, than as the original arborescent trunks. The impressions of the middle arteries of the dura mater are unnaturally large and deep, and the branches of those vessels which pass in the direction forwards are thick and short, and terminate abruptly by dividing into an unusual number of minute twigs; whilst those of the same trunks which take their course backwards are long and regular, and of graduated size from the beginning to the end of their course.”—See the engraving at p. 10.

In a previous article in the Phrenological Journal, the following additional evidence is afforded of the pathological condition of the cranium. It was dictated by Dr. Houston to Mr. Combe, and approved of by several anatomists who were present at the examination, which took place at Dr. (now Sir Henry) Marsh’s house, in Molesworth-street, on the 16th of August, 1835. “At the base, roughened in the sphenoidal region; the processes prominent and sharp-pointed; the foramen magnum of the occipital bone irregular, and the condyloid processes projecting into it. Some parts in the occipital fossæ, the supra-orbital plates, and other portions of the skull, were so thin as to be transparent. The marks of the arteries of the dura mater on the vault were large and deep, but the general surface of the interior of the vault was smooth. Along the line of attachment of the falx the bone was porous, from the multitude of small foramina which had transmitted blood-vessels from the dura mater to the bone in that situation. Above the frontal protuberances (in the region of benevolence) the bone was thickened, apparently by a deposition of bony matter on its inner surface,—making the inner surface at that part, on

both sides, flat in place of concave, and smoother than the other parts, which was the more remarkable, as the other portions of the skull were rather thin. Below, or anterior to that flattened space, about a dozen of small, deep-fissured foramina existed, in a cluster of six or seven on each side, apparently indicating a fungous state of the dura mater at that place. Some foramina in the middle basilar fossæ of the skull were observed, similar to those just noticed, and evidently arising from the same cause. The exterior surface of the skull was smooth and natural. The skull shewed clearly increased vascularity of the dura mater in the basilar and anterior regions. The anterior fossæ were small both in the longitudinal and in the transverse directions. The middle fossæ were of ordinary size; the posterior fossæ very large, wide, and deep. The internal parts corresponding to the frontal protuberances were unequal in concavity: at neither was there any depression corresponding to the great prominences on the outer surface. The two hemispheres were regular and symmetrical."

Most of the so-called pathological appearances here detailed are, however, it is well known, common and natural occurrences in old crania, and no wise indicative of disease. The foramina alluded to are no evidence whatever of a fungous state of the dura mater; but the deep sulci for the meningeal arteries are certainly abnormal, and shew a long-continued excess of vascular action, such as would attend cerebral congestion.

Mr. Hamilton has kindly furnished us with the following communication, accompanied by drawings of the skull, which he made at the time. "In September, 1835, I had the skulls of Swift and Stella in my possession, and, agreeably to your desire, I send you the observations I made on them at the time, together with the sketches which you wished for. On looking at Swift's skull, the first thing that struck me was the extreme lowness of the forehead, those parts which the phrenologists have marked out as the *organs of wit, causality, and comparison, being scarcely developed at all*; but the head rose gradually, and was

high from benevolence backwards. The portion of the occipital bone assigned to the animal propensities, philo-progenitiveness and amativeness, &c., appeared excessive. The side view shewed great elevation above the level of the horizontal line drawn through the meatus auditorius externus. The front view exhibited extreme width of the forehead, large frontal sinuses, and very well-marked external canthi. The orbits were very large, and the orbital plates of the frontal bone very flat, allowing room for great development of the anterior lobes of the cerebrum, and great width of the root of the nose, making the space between the orbits unusually large. On the inside of the upper segment of the skull the groove for the middle meningeal artery was remarkably deep, as were also the depressions for the glandulæ Pacchionæ. The frontal bone was very thick, but the osseous structure did not appear to me to be diseased. It was, however, when looking into the interior, and examining the base, that the wonderful capacity of the skull became apparent. From the flatness of the orbital plates, and the great width of the forehead, the room for the anterior lobes of the cerebrum was very great, the depressions, also, for the middle lobes, were very deep. Although, viewed *externally*, the cerebellum would have been pronounced large, yet, in consequence of the tentorium having been exceedingly low, the cerebellum must have been very small, and the posterior lobes of the cerebrum, consequently, very large. In the temporal regions the skull was thin and semi-transparent; the frontal sinuses were small, though their external appearances would have led to a different conclusion.

“Although the skull, phrenologically considered, might be thought deficient, yet its capacity was, in reality, very great, capable of containing such a brain as we might expect in so remarkable a genius. I took an ordinary skull, and making a section of it on the same level with that of Swift’s, I compared their outlines (drawn on paper) together, and found that the

latter exceeded it in a very remarkable manner, particularly in its transverse diameter."

From these observations of Messrs. Houston and Hamilton we are enabled to glean some information with regard to the pathological appearances still existing in the cranium, ninety years after its interment; and it is fortunate that the skull fell into the hands of these gentlemen, or, in the phrenological mania which then existed, it is more than probable that these appearances would have passed unrecorded. At the same time we must remark, that the peculiarity of the disease of the eye, on which Dr. Mackenzie has addressed us, seems to have completely escaped the notice of any of the persons engaged in these investigations.

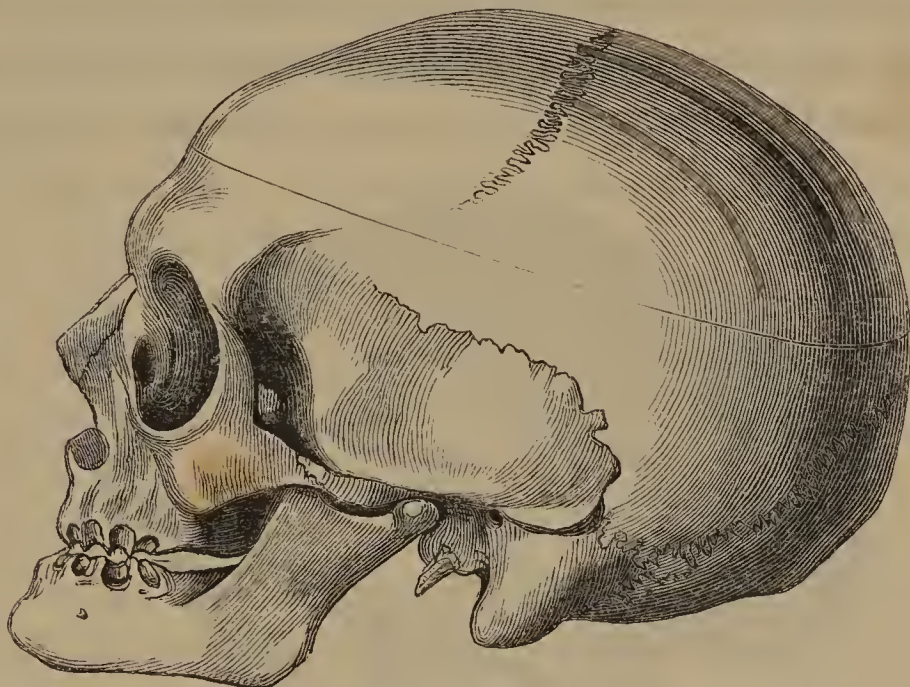
What the exact recent appearances were we have not been enabled to discover. If they were known to, they have not been handed down by any of Swift's many biographers. We have made diligent search among the newspapers and periodicals of the day, but have not been able to discover anything further than that which is already known, viz.: that his head was opened after death, when it was found that his brain was "loaded with water."*(a)* To this may be added the tradition of old Brennan, his servant, to whom we alluded at page 3, and who, according to Dr. Houston, on the authority of Mr. Maguire, boasted, "that he himself had been present at the operation, and that he even held the basin in which the brain was placed after its removal from the skull. He told, moreover, that there was brain mixed with water to such an amount as to fill the basin, and by their quantity to call forth expressions of astonishment from the medical gentlemen engaged in the examination."*(b)*

(a) Dr. Lyon's manuscript remarks upon Dr. Hawksworth's Memoir, quoted by Mr. Monck Mason in his History of St. Patrick's Cathedral. See pages 407 and 408.

(b) Phrenological Journal, vol. ix. p. 606.

We have reason to believe that the medical men who attended Swift in his last illness were his friends, Mr. Nichols,^(a) then Surgeon-general, and one of the surgeons of Dr. Steevens' Hospital, and Dr. Grattan, a very eminent physician at that time in Dublin, both of whom are mentioned in Swift's will. The examination was made by Mr. Whiteway^(b).

Accurate casts were made both of the exterior and interior of Swift's skull, and from these and the drawings furnished to us by Mr. Hamilton, we are enabled to furnish the accompanying accurate illustrations.



This represents a profile view of Swift's cranium, to the description of which, in the foregoing pages, we may add, that,

(a) John Nichols succeeded Mr. Proby in the office of Surgeon-General. He was one of the corporation of Steevens' Hospital, and the first surgeon elected to that institution. He died in 1766.

Dr. James Grattan was the son of a clergyman, and one of seven brothers remarkable for their great abilities. He was appointed physician to Steevens' Hospital in 1733, and died in 1747. Swift left him in his will the use of his strong box.

See the notices of these gentlemen in Swift's Works by Sir Walter Scott, vol. i. pp. 522-3; vol. xix. p. 36; and vol. xviii. pp. 499 and 530.

(b) John Whiteway, nephew to Mrs. Whiteway, so frequently referred to in the life and writings of Swift, was a very distinguished surgeon in Dublin about the middle of the last century. Swift bequeathed him "one hundred

in its great length in the antero-posterior diameter, its low anterior development, prominent frontal sinuses, comparative lowness at the vertex, projecting nasal bones, and large posterior projection, it resembles, in a most extraordinary manner, those skulls of the so-called Celtic aborigines of Northern Europe, of which we have elsewhere given a description, and which are found in the early tumuli of this people throughout Ireland(*a*). The curved horizontal line marks the section formed in making the *post mortem* examination.

The annexed illustration is taken from a cast of the interior of the cranium, and is one of exceeding interest, inasmuch as it accurately represents the appearances described by Messrs. Houston and Hamilton, particularly the enormous development



of the vessels within the cranium. It resembles the cast of a recent brain much more than that of the interior of a skull, and shews the very small anterior lobes, the great size of the glandulæ Pacchionæ; the exceedingly small cerebellum,—not the result either of compression or degeneration during life, nor

pounds in order to qualify him for a surgeon,” and “five pounds to be laid out in buying such physical and chirurgical books as Dr. Grattan and Mr. Nichols shall think fit for him.” He was elected surgeon to Steevens’ Hospital in 1762, and died in 1797. He was a very skilful operator, and generally employed the flap operation in amputations.

(*a*) See a Lecture on the Ethnology of the ancient Irish: 1844. See also the Irish crania in the museum of the Royal Irish Academy.

produced by disease, but as a natural formation; as may be seen by the very low position of the tentorium. It likewise exhibits the immense size of the posterior and middle lobes, particularly the former. We do not find any appearance of disease in the anterior lobes, either on their superior or orbital surfaces, as far, at least, as the interior of this cast of the skull is capable of demonstrating.

Before proceeding further in this inquiry, or making any observations on the detail of symptoms, and the *post mortem* appearances enumerated, there is one more circumstance connected with the last illness and the death of this illustrious man which should be brought to light, particularly as it has escaped the notice of most of his biographers. After the Dean's death, and subsequently to the *post mortem* examination, a plaster mask was taken from his face, and from this a bust was made, which is now in the Museum of the University, and which, notwithstanding its possessing much of the cadaverous appearance, is, we are strongly inclined to believe, the best likeness of Swift,—during, at least, the last few years of his life,—now in existence. The engraving at page 13 most accurately and faithfully represents a profile view of the right side of this bust, the history of which it is here necessary to relate. This old bust, which has remained in the Museum of Trinity College from a period beyond the memory of living man, has been generally believed to be the bust of Swift; but as there was no positive proof of its being so, it has been passed over by all his biographers, except Scott and Monck Mason, the former of whom thus describes it: “In the Museum of Trinity College, Dublin, there is a dark plaster bust, or cast, of Dean Swift. It is an impression taken from the mask applied to the face after death. The expression of countenance is most unequivocally maniacal, and one side of the mouth (the left) horribly contorted downwards, as if convulsed by pain.” He further adds: “It is engraved for Mr. Barrett's essay;” but if it was, it never appeared, and has never before

been published either with or without Barrett's essay(*a*). Sir Walter has greatly exaggerated the amount of contortion which the face exhibits; on the contrary, the expression is remarkably placid, but there is an evident drag in the left side of the mouth, exhibiting a paralysis of the facial muscles of the right side, which, we have reason to believe, existed for some years previous to his death, for we find the same appearance (though much glossed over by the artist), together with a greater fulness, or plumpness, of the right cheek, shewn in a very admirable marble bust of Swift (probably the last ever taken), in the possession of Mr. Watkins, the picture-dealer, of this city. Here, then, we have another and a very important and well-marked feature in this very interesting case, brought to light above a hundred years after death. But before we proceed with the evidence adduced by the bust, it becomes necessary to prove its identity, which, until now, could not be done satisfactorily. Upon the back of this cast, and running nearly from ear to ear, we find two lines of writing, greatly defaced, and a part of the upper and middle lines completely obliterated(*b*). This much, however, can still be read :

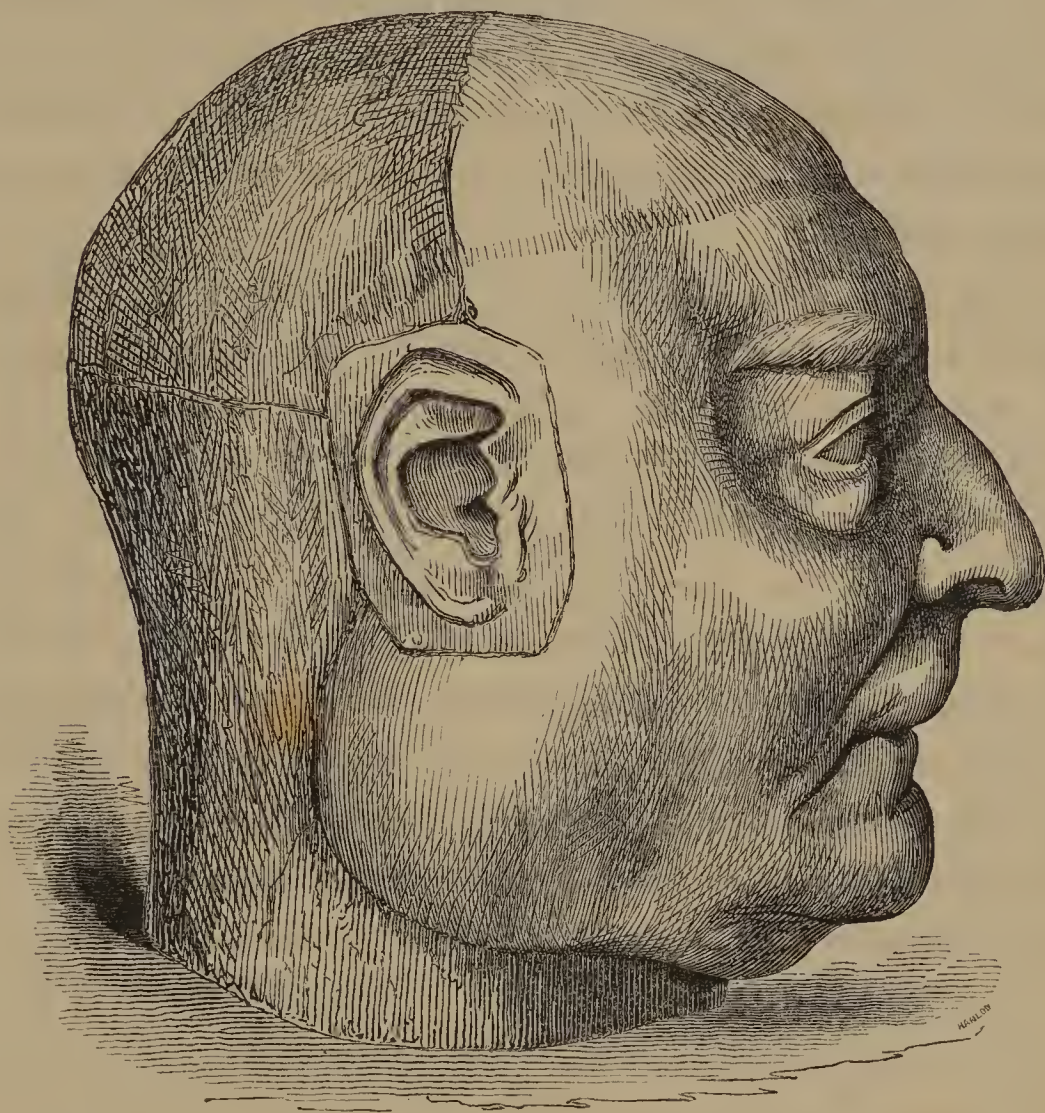
“ *Dean Swift, taken off his * * * * the night of his burial, and the f * * * one side larger than the other in nature. * * Opened before. * * * The mould is in pieces.*”(c)

(*a*) In Nicholl's edition of Sheridan's Life and Writings of Swift, we find a full-face portrait of the Dean, said to have been taken the night after his death. It was this, perhaps, led Sir Walter into the error we have alluded to. Mr. M. Mason supposed, but without adducing any evidence to support his assertion, that the engraving in Sheridan's Life of Swift was taken from this bust. We are inclined to believe Mr. Nicholl's statement that the engraving was made from a picture taken after death.

(*b*) We are indebted to Mr. Ball, the able curator of the museum of the University, for permission to publish this drawing, which was made by Mr. G. Du Noyer, and cut by Mr. Hanlon. The latter gentleman likewise engraved the skulls of Swift and Stella, which were drawn on wood by our distinguished anatomical draughtsman, Mr. Connolly.

(*c*) The original mask remained in the Museum T. C. D. till within a few years ago, when it was accidentally destroyed.

Still this proof was inconclusive ; but a deep indentation, running nearly parallel with the brow, shews us where the calvarium had been sawn, and the pericranium drawn over it subsequently, and this indentation accurately corresponds with the division of the skull found in Swift's coffin in 1835, thus proving incontestibly the identity of both : they also corre-



spond in the breadth, height, and general outline and measurements of the forehead, allowing about three-sixteenths of an inch for the thickness of the integuments. Posteriorly, however, the bust and skull do not correspond ; nevertheless this fact does not in any way militate against our argument, but rather tends to strengthen it, for, upon a careful examination of the bust, it is at once manifest that all the posterior part is fictitious, and evidently finished out, and modelled

in clay, and afterwards the plaster rasped down according to the eye of the artist, as may be seen in the annexed engraving. It was made in two parts, and the difference in surface between the hinder part and the smooth, polished, anterior portion, at once stamps it as fictitious. There is no ear upon the left side, and that upon the right was evidently taken off the body separately, and afterwards fitted into the bust. That it was a cast from the ear of Swift the reader has only to look at Lord Orrery's portrait, or any of the busts of the Dean to be convinced, for Swift's ear was of a very peculiar formation.

This bust, like the skull, is quite edentulous ; the nose slightly turned to the left side, and the *left eye* much less full and prominent than the right : in fact it is comparatively *sunken and collapsed* within the orbit. It is well known that Swift had remarkably large, full, and prominent blue eyes. We may, perhaps, account for the hinder portion of the bust being constructed in the manner I have described, by the fact of the Dean having a quantity of long, white hair on the back of his head, which his attendants would not permit to be either removed or injured by taking the mould. In confirmation of this supposition we quote the following passage from Mr. Monck Mason's *Annals of St. Patrick's Cathedral*, a work, by the way, which contains a clearer and better view of Swift than any other we have read. "A person who resides in my family," says Mr. Mason, in 1820, "is one of the few persons, perhaps the only one now living, who witnessed this melancholy spectacle,"—alluding to his lying in state. "She remembers him as well as if it was but yesterday : he was laid out in his own hall, and great crowds went to see him. His coffin was open ; he had on his head neither cap nor wig ; there was not much hair on the front or very top, but it was long and thick behind, very white, and was like flax on the pillow. Mrs. Barnard, his nursetender, sat at his head ; but having occasion

to leave the room for a short time, some person cut a lock of hair from his head, which she missed upon her return, and after that day no person was admitted to see him.”(a)

Let us now briefly review the symptoms of this very remark-

(a) Throughout the previous pages we have not made references to the works from which we have derived our information, as they would require almost as much space as the text itself. Our principal authority was the first and last five volumes of Scott's edition of Swift's Works, particularly his epistolary correspondence. To these may be added, Orrery's, Hawkesworth's, Deane Swift's, Sheridan's, Johnson's, Faulkner's, Nicholl's, Berkely's, Roscoe's, Wills's, and Mr. Monck Mason's biographies, which were published either separately, or attached to editions of his works.

A very remarkable and very general popular error exists with respect to one of Swift's biographers. Having met frequent allusions to “Delany's Life of Swift,” and even seen quotations purporting to be from it, we anxiously sought for it, first in all the public libraries, and then among our literary friends, and, in the outset, the recovery of this very generally known work seemed comparatively easy; for notwithstanding that it was not contained in any of the catalogues of libraries, all the persons connected with these institutions informed us that they were perfectly familiar with it, and would certainly have it for us on our next visit; and most of the publishers and booksellers knew it by appearance, but were unable just at the moment to lay their hands upon it. Our literary acquaintances had all seen it, several had read it, and two of them went so far as to say they possessed it and would send it to us in the morning. Still the book could not be procured either here or in London. The only difference of opinion among those most familiar with it was as to whether it was published in quarto or octavo. Having at length assured ourselves that no such work had ever existed, and even written part of this note, our conviction was greatly staggered by finding in the first general catalogue published by the Royal Society, the following entry: “Delany, Patrick,—A Supplement to Swift's Life, containing Miscellanies by the Dean, Sheridan, Johnson, &c., with notes by the Editor (J. Nicholls). 4to. London, 1779.” This appeared all but conclusive; yet not quite so, however. Our friend Dr. Madden undertook to examine the work itself, and thus answers our inquiries: “With regard to this work of Delany on Swift's life, which you were so long in search of, and which so many people speak of but cannot shew, lo! no such work of Delany's exists—no such work was ever written by Delany: the book described in the R. S. catalogue is wrongly described, for, on examining it, I find it is ‘A Supplement to Swift's Life, containing Miscellanies by the Dean, Dr. Delany, Sheridan, Johnson, &c., with Notes by the Editor. London, 4to.

able and lengthened case, endeavour to form a diagnosis of it, inquire into the cause of Swift's ophthalmic affection, and consider the question of his insanity, both in a medical and legal point of view.

From the foregoing recital of his symptoms we learn that

1779.' In fact, the thirteenth vol. of the 4to edition of Swift's Works, edited by Mr. Nicholls, in 1779, some time after the death of Dr. Delany."

Delany did write two works, however, upon Swift, though not generally known to the learned; neither of these were, however, lives or biographies. The first was entitled, "Observations upon Lord Orrery's Remarks upon the Life and Writings of Dr. Jonathan Swift, containing several singular Anecdotes relating to the Character and Conduct of that great Genius, and the most deservedly celebrated Stella, in a series of Letters to his Lordship; to which are added the Original Pieces of the same Author (excellent in their kind) never before published." Dublin: printed for Robert Main, at Homer's Head, in Dame-street, 1754, 12mo., pp. 211. And another edition, in 8vo., was contemporaneously published by Reeve, at the Shakespear's Head, in London, pp. 310. It bears no name; but the letters J. R., are affixed to the preface, and it is well known to be Delany's. Besides this spirited answer to Lord Orrery, the same writer, in 1755, published a tract refuting some statements contained in Deane Swift's work. And as these animadversions were personally levelled at Delany, and he answers them in the first person, and styles his tract, "A Letter to Deane Swift, Esq., on his Essay upon the Life, Writings, and Character of Dr. J. Swift, by the Author of 'Observations on Lord Orrery's Remarks,' &c." 8vo. London, Reeve, pp. 31; it fixes the authorship of the "Observations" upon Dr. Delany.

Sir Walter Scott's lengthened quotation from Dr. Delany is, with the exception of one paragraph, nowhere to be found in either of Delany's works. It is chiefly made up from Faulkner's and Hawkesworth's biographies, which, as far as this portion of the life of the Dean is concerned, are *solely* and *entirely* abstracted from Deane Swift's and Mrs. Whiteway's letters already alluded to. We could point out several sentences in this account of the Dean's last illness, which are *verbatim* the same in no less than five works, and that without the smallest acknowledgment.

There is an autograph letter from Sir Walter Scott to C. G. Gavelin, Esq., of this city, in the MS. Library, T. C. D., in which he states that he had nothing whatever to do with the publication or revision of the second edition of the "Works of Jonathan Swift." We believe the editing of the second issue of this publication was intrusted to a son of Hogg, the Ettrick Shepherd.

whatever the real, original, exciting cause of Swift's bodily ailment may have been, it is plain that it was attributed, both by himself and his physicians, to some derangement of the stomach, and the remedies prescribed for him are conclusive on this point. It has been shewn that these gastric attacks were, in early life at least, induced by irregularities of diet. It is also evident that they were attended with vertigo, deafness, sickness of stomach, pain in the head, diminution of muscular power, as shewn by his tottering gait, and numbness or some slight loss of sensation in the upper extremities. That these in turn were symptomatic of some cerebral affection is manifest; but how far it depended on, or was induced by gastric disease, it is now difficult to determine; cases are, however, on record, which tend to shew that all the early symptoms of the Dean's malady may be produced by affections of the stomach and alimentary canal. As Swift advanced in years his symptoms became more decidedly cerebral, whilst the attacks became induced by causes which acted more on the mental than the corporeal nature, such as excitements of various kinds, great mental labour, and strong emotions; to which the peculiarity of his disposition, and the position which he occupied, especially predisposed him.

Of his treatment we shall only remark, that however it may have been applicable in the early stage of his disease, it was anything but judicious in its more advanced and distinctly cerebral phase. Swift certainly drank more wine, took more violent exercise, and was subjected to more frequent and stronger excitements, than a judicious physician of the present day would recommend, or could with safety permit; but then it must be remembered how very headstrong and unmanageable a patient he was, and also that he was, for the most part, his own medical adviser. Indeed he must have had an iron constitution to have withstood the various and long-continued shocks which we have already detailed. To the general aggravation of all the symptoms enumerated in the history of

his case, must now be added paralysis of, at least, the face; and this, from a careful examination of his busts, and other circumstances, we are inclined to think, did not occur until about 1740, when he was in his seventy-third year. It is more than problematical that, for several years previous to this, Swift laboured not only under attacks of temporary congestion of the head, but of chronic meningitis and cerebritis; and from the date of his loss of memory and the supervention of the paralysis we are inclined to believe effusion set in. The long-continued and excessive vascular action to which we refer has left its traces indelibly marked upon the interior of the cranium, as shewn by the engraving at p. 10; and the serous effusion is, in fact, the only *post mortem* appearance recorded by his biographers, for we have no record whatever of the condition of the substance of the brain, though it is probable that there may have been some softening of it. That effusion was suspected during life, we may presume from the question of using the trephine having been raised(*a*). This state was either preceded by or attended with general atrophy and emaciation; impairment of the senses of sight and hearing, great irritability of temper, and excessive restlessness; then loss of memory, and *inability* of speaking; exophthalmus of the left eye, in all probability produced by an internal abscess, or intense inflammation of the anterior lobe of his brain or its coverings, not unlike that fatal form of disease which attacks the dura mater and the brain, over the mastoid and petrous portion of the temporal bone; or, an abscess may have formed in the orbit itself, and served to increase the cerebral symptoms, as well as the pain, &c., under which he then laboured. How the ophthalmic affection ended we can only conjecture:—from the sudden return of consciousness the last day of his illness, it

(*a*) It is a well-known fact that, some years afterwards, several insane patients in Swift's Hospital were trephined, on the supposition that their insanity was produced by the brain having become too large for the cranium. We have no notice of Swift's deafness after the year 1741.

is possible that, if it was an abscess in the orbit, it opened externally, and so relieved him, for a time at least. That the eye was lost we are inclined to believe from the sunken appearance which it presents in the bust in the Museum of Trinity College, particularly when compared with that upon the right side, which is remarkably full and prominent. There is no evidence whatever that he ever had any epileptic fit till the day before his decease, when it appears that he was "in strong convulsive fits for thirty-six hours before death," although his actual dissolution was said to be remarkably placid.

That Swift not only "expired a driveller and a fool," but lived a madman, is what the world generally believes. To enter into the question of what constitutes insanity or idiocy would here occupy more space than we are able to devote to this part of the question; but having stated at length all that really is known, or has come down to us with any degree of truth attached to it, of Swift's sufferings and diseases, in our former article, we confidently appeal to our medical and legal readers for the truth of our statement, when we assert that up to the year 1742 Swift shewed no symptom whatever of mental disease, beyond the ordinary decay of nature. That toward the end of that year the cerebral disease under which he had so long laboured, by producing effusion, &c., destroyed his memory, and rendered him at times ungovernable in his anger, as well as produced paralysis, &c., is quite certain; but all this was the result of physical disease in one whose constitution was of great nervous irritability, and who had long survived more than "the years of a man." That his not speaking was not the result either of insanity or imbecility, but arose either from paralysis of the muscles by which the mechanism of speech is produced, or from loss of memory of the things which he wished to express, as frequently occurs in cases of cerebral disease, cannot be doubted; for he would often, say his biographers, "*attempt* to speak his mind, but could not *recollect* words to express his meaning, upon which he would

shrug up his shoulders, shake his head, and sigh heartily :” and, again, we read that he “ *endeavoured, with a good deal of pain, to find words to speak.*” And in addition to this we have the authority of one of the very few eye-witnesses of the Dean’s condition at this period, who says, that he “ *never yet, as far as I could learn, talked nonsense, or said a foolish thing.*”

That the law appointed guardians of his person is no proof whatever of his insanity ; for there are hundreds of cases in which the law very properly interferes with a man’s estate, although he may not be either legally or physiologically insane, but simply incapable of managing his affairs ; and it must be borne in mind that Swift had no family or any near relatives to look after him in his latter years. That the poor Dean had not even then lost his powers either of sarcasm or rhyming may be gathered from the following quotation, which we extract from Scott’s edition of his works. The precise date of the circumstance has not been recorded, but it was certainly subsequent to the appointment of guardians to his person.

“ The Dean in his lunacy had some intervals of sense, at which his guardians or physicians took him out for the air. On one of these days, when they came to the Park, Swift remarked a new building which he had never seen, and asked what it was designed for ? To which Dr. Kingsbury answered, ‘ That, Mr. Dean, is the magazine for arms and powder for the security of the city.’—‘ Oh ! oh !’ says the Dean, pulling out his pocket-book, ‘ let me take an *item* of that. This is worth remarking :—“ My tablets,” as Hamlet says, “ my tablets—memory, put down that !”’ Which produced these lines, said to be the last he ever wrote :—

“ ‘ Behold ! a proof of Irish sense ;
Here Irish wit is seen !
When nothing’s left that’s worth defence,
We build a magazine.’ ”

How far this proves the insanity or imbecility of its author the reader is to judge.

That the Dean had a fear of loss of memory and imbecility, or second childishness, may be gleaned from the previous history of his case, and from the circumstance related by Dr. Young of the withered tree, to which we have referred at p. 414 of our last Number; and it is possible that this presentiment may have received additional force in his mind, from the fact of his uncle, Godwin Swift, having remained in a lethargic and paralytic condition for several years prior to his death; and this, we find, is the circumstance which has induced some of his biographers to suppose that Swift laboured under an hereditary disease: but it must first be proved that paralysis and lethargy, such as the Dean's uncle suffered from, are of this character. We have shewn, by the previous history, that the Dean never had epilepsy, and never suffered from convulsions until within a few hours of his death.

It has been regretted that attempts should be made to disprove the insanity of Swift, even prior to the year 1742, on the ground that some of his actions are best accounted for by supposing him *non compos mentis*. But this is a lament which we will not stop either to inquire into or discuss; and we would rather not deviate from the strictly medical questions relating to Swift, in the present essay(a).

We only wonder that Swift did not become deranged years previously: with a mind naturally irritable, a political intriguer, peevish and excitable; his ambition disappointed, his friendships rudely severed, his long-cherished hopes blighted; outliving all his friends, alone in the world, and witnessing the ingratitude of his country; while, at the same time, he laboured under a most fearful physical disease, in the very seat of reason, the effects of which were of the most stunning cha-

(a) While collecting materials for this essay, many circumstances not generally known, and not properly understood, with regard to Swift, chiefly, however, of a literary character, have attracted our attention. These, with other circumstances of a like nature relating to Stella, &c., it is our intention to publish, in a short time, in a separate essay.

racter, and serving in part to explain that moodiness and moroseness of disposition, which bodily infirmity will, undoubtedly, produce;—we repeat, we only wonder that his mind did not long before give way. But that Swift was either mad in middle life, or mad or imbecile in latter years, as tried and tested by the meaning and definition of these terms, as laid down by the most esteemed authors, we again assert, has not been proved.

There is one other question connected with the second examination of Swift's head to which we would briefly allude; we say briefly, because it has been already ably discussed by an esteemed contemporary^(a), and because we do not desire to occupy either the pages of our Journal or the time of our readers with the examination of a topic, the ephemeral *prestige* of which has long since passed by. We allude to the phrenological examination of Swift's skull in 1835. We beg leave to premise that, prior to this date, a phrenological examination had been made by a distinguished professor of that *ci-devant* system, of a number of aged lunatics in the Richmond Asylum of this city, in which the previous characters of these persons was said to have been described, from their cranioscopical examination, with great fidelity,—a fact which was vauntingly proclaimed with no small degree of triumph by the advocates of that system. Shortly afterwards Swift's skull was handed to one of the great prophets of this art, who pronounced it to be a very common-place head indeed,—nay, from the low frontal development, almost that of a fool; and in the measurements of the cranium given in the Phrenological Journal we find amativeness large and wit small! with similar contradictions to the well-known character of this great genius; but then, all these discrepancies are endeavoured to be accounted for by the fact, that the skull then presented was not that of Swift the wit, the caustic writer,

(a) We beg leave to refer our readers to a very able article on the subject in the London Medical Gazette for 24th October, 1835.

and the patriot,—but that of Swift, the madman and the fool; and to explain this it has been asserted, that the skull had collapsed during the period of his mental disease; although, in the previous instance to which we have alluded, at the Richmond Asylum, the periscope was made without taking into account this item in the physical as well as moral change of the lunatics.

Without examining into the arguments contained in the *Phrenological Journal*, we at once deny the fact of Swift's skull having altered during life, or of insanity ever producing the effects therein stated; and we may confidently defy its conductors to the proof. Esquirol, one of the highest authorities on the subject, found, from a long series of careful observations, that the skull previously normal does not alter its form or capacity from long-continued insanity or imbecility.

The pictures we have seen of Swift are all, with one exception, full-faced likenesses, and are chiefly decorated with the large, full-bottomed wig, which he usually wore. They, it is true, give an appearance of a high, commanding forehead; but, independent of the flattery of the artists, they in no wise prove the fact they appear to represent, for, decorating the bust, which we have figured at page 13, with a similar head-dress, and viewing it in front, we find it presents fully as elevated and expansive a frontal development as any of the pictures which we have seen of the Dean; and, moreover, the very engraving given in *Sheridan's Life*, to which we have already alluded, and which was taken either from the body after death or from this cast, shews in its front view the same height of the frontal region exhibited in the pictures, and will, if encircled with the wig, give the usual outline of the Dean's head represented in all his portraits. The exception to which we refer is that engraved for Lord Orrery's work, the original of which is still in this city^(a); it is a profile by Barber, taken when the Dean

(a) In the possession of our friend, Joseph Le Fanu, Esq., the descendant of Sheridan.

was probably about sixty, and is the only portrait of him which we have seen or heard of without the periwig. This portrait, although not a perfect profile, corresponds accurately with the posthumous bust which we have represented in the outline of the anterior portion of the head. Revenet, Lord Orrery's engraver, has laboured to throw a look of imbecility and weakness into this likeness, which the original in no wise possesses; a hint which his Lordship himself has improved upon in the portrait which he endeavoured to draw of his friend.

Of the busts of Swift, of which there are six well known in this city(*a*), we acknowledge that they rather strengthen the assertion of the phrenologists, for they exhibit six different forms of head, bearing but little resemblance to each other, although three or four of them were undoubtedly taken about the same time; yet they all more or less present the sloping forehead. But sculptors, even still less than painters, cannot be relied on for anatomical accuracy in the form of heads, and of this fact we might adduce many proofs. Although the forehead was so retiring that, at one of the meetings of the Dublin Phrenological Society it was stated, "that the man must have been apparently an idiot," in reality the capacity of the cranium was, as Mr. Hamilton has shewn, very great.

Before we dismiss this portion of the subject, we may remark, that the evidences of Swift's "violent and furious lunacy," his "frantic fits of passion," and his "situation of a helpless changeling," quoted from Sir Walter Scott's *Life* by the Phrenological Journalists, as proving their position, are only to be relied on so far as they accord with the extracts from those letters of Mr. Swift and Mrs. Whiteway which we have already

(*a*) We know of six busts of Swift in Dublin; that placed by T. Faulkner over the monument in St. Patrick's is a very admirable one, and it strikingly exhibits the sloping forehead, as any one may see who examines it by standing upon the steps of Archbishop Smith's monument, on the opposite side of the aisle.

given, for Sir Walter had no further means of knowing the Dean's condition.

The circumstance of Dean Swift's head exhibiting small intellectual, and large animal propensities, has not yet been accounted for by the votaries of phrenology.

Let us now briefly describe the origin and erection of St. Patrick's Hospital, bequeathed to us by Swift, the earliest, and one of the noblest charitable institutions of the country.

It has been supposed by his biographers that a presentiment of his insanity induced the Dean to devote his fortune to the erection of a lunatic asylum; and, probably from an expression in Orrery's work, that he was a fit inmate for his own asylum, it is generally believed that Swift was the first patient in the hospital, although it was not erected till several years after his death(*a*).

It is evident that Swift had long entertained the idea of establishing such an institution; and so early as November, 1731, when he wrote the verses on his own death, we find his determination thus graphically described in the concluding stanza of that celebrated poem:

“ He gave the little wealth he had
To build a house for fools and mad;
And shew'd by one satiric touch,
No nation wanted it so much.”

In September, 1732, he appears to have spoken with Sir William Fownes(*b*), on the subject of the establishment of an

(*a*) Lord Orrery, although he never saw Swift in latter years, and had only vulgar rumour and the letters of Mrs. Whiteway and D. Swift to guide him, thus writes of his state after the year 1742: “ His rage increased absolutely to a degree of madness; in this miserable state he seemed to be appointed as the first proper inhabitant of his own hospital, especially as, from an outrageous lunatic, he sunk afterwards into a quiet, speechless idiot, and dragged out the remainder of his life in that helpless situation.”—*Orrery's Remarks.*

(*b*) A distinguished citizen of Dublin, who had, shortly before this date,

hospital, but without, it would appear, mentioning his own benevolent intention on the subject; and the verses which we have just quoted, though written, had not then been published. After this conversation Sir William addressed the Dean at considerable length on the matter, and enclosed him a proposal, "That an hospital called Bedlam be built in the city of Dublin, or liberties, for the reception of lunatics from any part of the kingdom."(*a*) Among the other items in this proposal,—which is exceedingly well drawn up, and, though published upwards of a century ago, is well worthy of attention at the present day,—we find one inviting the College of Physicians to contribute to this good work by appointing some of their body to superintend the erection of cells, and to regulate the food and diet, &c., of the inmates.

"When I was Lord Mayor," continues Sir William, in his letter accompanying the proposal, "I saw some miserable lunatics exposed, to the hazard of others as well as themselves. I had six strong cells made at the workhouse for the most outrageous, which were soon filled; and by degrees, in a short time, those few drew upon us the solicitations of many, till, by the time the old corporation ceased, we had in that house forty and upward. The door being opened, interest soon made way to let in the foolish, and such like, as mad folks. These grew a needless charge upon us, and, had that course gone on, by this time the house had been filled with such. The new corporation got rid of most of these by death, or the care of friends, and came to a resolution not to admit any such for the future; and the first denial was to a request of the Earl of Kildare, which put a full stop to farther applications. As I take it, there are at this time a number of objects which require assistance, and probably many may be restored if proper care could be taken of them. There is no public place for their reception,

served the office of Lord Mayor. He built the Castle Market, and Fownes'-street is called after him.

(*a*) Scott's *Life and Works of Swift*, vol. xviii. p. 48.

nor private undertakers, as about London. Friends and relations here would pay the charge of their support and attendance, if there were a place for securing such lunatics.

“ I own to you I was for some time averse to our having a public Bedlam, apprehending we should be overloaded with numbers under the name of mad. Nay, I was apprehensive our case would soon be like that in England; wives and husbands trying who could first get the other to Bedlam. Many who were next heirs to estates would try their skill to render the possessors disordered, and get them confined, and soon run them into real madness. Such like consequences I dreaded, and therefore have been silent on the subject till of late. Now I am convinced that regard should be had to those under such dismal circumstances, and I have heard the Primate and others express their concern for them; and no doubt but very sufficient subscriptions may be had to set this needful work on foot. I should think it would be a pleasure to any one that has any intention in this way to see something done in their life-time rather than leave it to the conduct of posterity. I would not consent to the proceeding on such a work in the manner I have seen our poor-house and Dr. Steevens’s Hospital, viz., to have so expensive a foundation laid that the expense of the building should require such a sum, and so long a time to finish, as will take up half an age.

“ My scheme for such an undertaking should be much to this effect:—

“ First, I would have a spot of ground fixed on that should be in a good open air, free from the neighbourhood of houses; for the cries and exclamations of the outrageous would reach a great way, and ought not to disturb neighbours, which was what you did not think of when you mentioned a spot in a close place, almost in the heart of the city. There are many places in the outskirts of the city, I can name, very proper.

“ Next to the fixing of a spot, I would, when that is secured (which should be a good space), have it well enclosed

with a high wall; the cost of all which must be known. Then I would have the cells at the Royal Hospital Infirmary, lately made for mad people, be examined how convenient, and how in all points they are adapted to the purpose, with the cost of these cells, which I take to be six or eight. Then I would proceed to the very needful house for the master and the proper servants. Then another building, to which there should be a piazza for a stone gallery for walking dry; and out of that several lodging-cells for such as are not outrageous, but melancholy, &c. This may be of such a size that it may be enlarged in length, or by a return, and overhead the same sort of a gallery, with little rooms or cells, opening the doors into the gallery, for, by intervals, the objects affected may be permitted to walk at times in the galleries. This is according to the custom of London. Annexed to the master's house must be the kitchen and offices." And this very plan seems to have been subsequently adopted in the erection of the present hospital. Fownes suggested the propriety of erecting the institution in an open space, formerly called The Dunghill, facing the end of South King-street, or of purchasing "the large stone building called an alms-house, made by Mrs. Mercer," now Mercer's Hospital.

In January, 1735, Swift memorialized the Mayor and Corporation of Dublin for a piece of ground on Oxmantown Green(*a*), for the purpose of erecting the hospital; and they appointed a "committee to inspect the said green" for that purpose.

The following letter, the original of which(*b*) now lies before

(*a*) Oxmantown Green, on which Blackhall-place and the Blue-Coat Hospital now stand,—one of the ancient Danish localities in Dublin, on the northern side of the river. It is curious that this memorial of the Dean commenced as follows: "That the said Dean, having by his last will and testament settled his whole fortune to erect and endow an hospital," &c., although the Dean's will bears date the 3rd of May, 1740;—therefore it would appear that he had made some previous will, or settled his property for this purpose by means of some other instrument.

(*b*) In the possession of A. J. Maley, Esq.

us, is so much to the purpose, so characteristic of the man, and reminds us so forcibly of the expressions of another distinguished churchman in his latter days, that we here insert it:

“ *To Eaton Stannard, Esq.,*

“ *Recorder of the City of Dublin.*

“ SIR,—I believe you may possibly have heard from me, or publick report, of my resolution to leave my whole fortune, except a few legacies, to build an Hospital for Ideots and Lunaticks in this city or the suburbs; and, after long consideration, I have been so bold as to pitch upon you as my director in the methods I ought to take for rendering my design effectual. I have known and seen the difficulty of any such attempt by the negligence, or ignorance, or some worse dealing by executors and trustees. I have been so unfortunate, for want of some able friend of a publick spirit, that I could never purchase one foot of land; the neighbouring country squires(*a*) always watching, like crows for a carcase, over every estate that was likely to be sold; and that kind of knowledge was quite out of the life I have led, which in the strength of my days chiefly past at courts and among ministers of state, to my great vexation and disappointment, for which I now repent too late. I therefore humbly desire that you will please to take me into your guardianship as far as the weight of your business will permit. As the City hath agreed to give me a piece of land, my wish would be to make the Lord Mayor, Recorder, and Aldermen, my trustees, executors, or governors, according as you shall please to advise; and out of these, Committees may be appointed to meet at proper times(*b*). My thought is, that the city will be careful in an affair calculated wholly for the City's advantage. If you would favour me so much as to fix any day during this vacation to dine at the Deanery, I shall

(*a*) The word “squires” is omitted in the copy of the letter published by Sir W. Scott.

(*b*) The city not having furnished the ground after all, may probably account for the names of the Corporation being omitted in the Dean's will.

be extremely obliged to you, and give you my very crude notions of my intentions.

“I am, with very great esteem, Sir,

“Your most obedient and obliged Servant,

“JONATH. SWIFT.

“*Deanery House,*

“*April 11th, 1735.*”

In 1737 a mortmain bill was introduced into the Irish parliament for preventing the settlement of landed property on the Church, or on public charities. The Dean, foreseeing the effect of this, petitioned against it, and it never passed into a law. The site finally chosen was on a piece of waste ground, or common, surrounding Dr. Steevens's Hospital, which, from its being mentioned in Swift's will, we must suppose he had been in treaty for prior to 1740. By this will he demised his whole property, amounting to about £12,000, to his executors, to purchase lands, with the profits of which to erect and endow “an hospital large enough for the reception of as many idiots and lunatics as the annual income of the said lands,” &c., shall be sufficient to maintain; and in case that a sufficient number of idiots and lunatics could not be procured, that incurables, not labouring under infectious diseases, should be admitted. The year after his death his executors became incorporated into a body of governors, and obtained a charter in 1746. Voluntary contributions were also set on foot, which, with parliamentary grants, and the issue of the Dean's bequest, enabled the hospital which now stands adjacent to that of Dr. Steevens to be opened upon the 19th of September, 1757, for the reception of fifty patients. It is now capable of accommodating 150 patients, seventy-five males and seventy-five females, besides the officers and servants of the institution, amounting to about thirty.

The various details of this noble institution are already well known to the profession and the public, and, therefore, unnecessary to be here repeated. The late Lord Chancellor

of Ireland affected some important changes in carrying out the intentions of the noble donor. We have only further to remark upon two circumstances connected with the management of this institution. We regret to find that there is neither picture, bust, arms, carving, name, nor any other memorial of the munificent and distinguished founder to be seen in any part of this extensive institution. As the verses written upon the presentation of Swift's bust to the library of Trinity College by the senior sophisters, graphically allude to the Dean's bequest, we here insert them, the more particularly as they have not been printed in any collection of the Dean's works:

“ Rich in unborrow'd wit, thy various page
By turns displays the patriot, poet, sage.
Born to delight thy country, and defend,
In life, in death, to human race a friend ;
For, mad and idiots,—whom alone to teach
Thy writings fail,—thy will's last bounty reach.”(a)

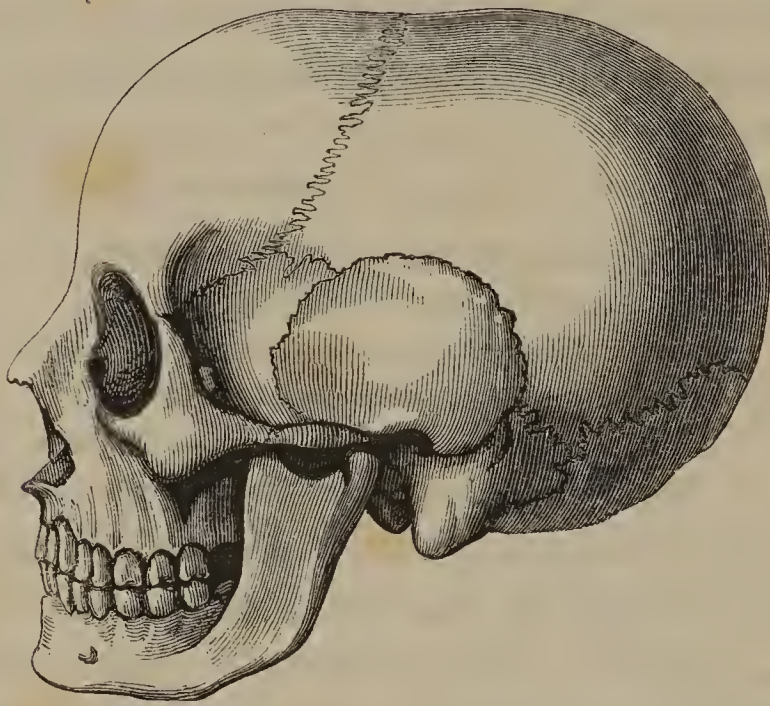
The other circumstance on which we would remark is the great facility which the institution offers for a school and clinique, in which to educate medical practitioners, both as attendants upon, and masters of similar institutions; and also for instructing nurses and keepers to be employed both in hospitals and in private practice. We feel that we need not enlarge upon this topic(b).

We beg leave to conclude this article, which has now extended to a far greater length than we originally intended, by presenting our readers with the accompanying engraving of the cranium of Esther Johnson, better known as Stella, which was exhumed from the vaults of St. Patrick's Cathedral, along with that of Swift, in 1835. “ The coffin in which it lay was

(a) Faulkner's Journal, March 21, 1749.

(b) For the particulars of the history of St. Patrick's, or Swift's Hospital, as it is now usually called, we refer our readers to Harris's, Whitelaw and Walsh's, and all other histories of Dublin, as well as the charter of incorporation, and the various Reports made by the Inspectors of Lunatic Asylums, and other documents of that nature, for the last twenty years.

of the same material, and placed in the same relation to the pillar bearing the tablet to her memory, as that of the Dean; and the bones constituting the skeleton exhibited the same characters, and were in equally perfect preservation, though interred ten years earlier. Its exact and proper place was well known, and no other coffin lay near it from which any confusion might have arisen.”(a)



As may be seen by the accompanying representation, it is a perfect model of symmetry and beauty. Its outline is one of the most graceful we have ever seen; the teeth, which, for their whiteness and regularity were, in life, the theme of general admiration, are, perhaps, the most perfect ever witnessed in a skull. On the whole, it is no great stretch of the imagination to clothe and decorate this skull again with its alabaster skin, on which the rose had slightly bloomed; to adorn it with its original luxuriant dark brown hair, its white, expanded forehead, level pencilled eye-brows, and deep lustrous eyes, its high Roman nose, its delicately chiselled mouth, and short

(a) *Phrenological Journal*, vol. xix. p. 607. The skull of Stella was returned to its former, and, we hope, its last resting place, at the same time as that of Swift. Lest our American friends might suppose that any slight or insinuation was intended by the note at p. 4, we beg leave to state that it was one of our own countrymen who carried off the larynx of the Dean.

pouting upper lip, its full, rounded chin, and graceful swelling neck,—when we shall find it realize all that description has handed down to us of an intellectual beauty of the style of those painted by Kneller, and with an outline and form of head accurately corresponding to the pictures of Stella which still exist(*a*).

To Dr. Mackenzie, of Glasgow, our readers are indebted for any interest this article may possess, or any new light which it may have thrown upon the character and disease of our illustrious countryman. It has been well said, that Ireland worshipped Swift “with almost Persian idolatry. Sagacious and intrepid, —he saw, he dared; above suspicion, he was trusted; above envy, he was beloved; above rivalry, he was obeyed. His wisdom was practical and prophetic,—remedial for the present, warning for the future; he first taught Ireland that she might become a nation, and England that she must cease to be a despot. But he was a churchman. His gown impeded his course, and entangled his efforts; guiding a senate, or heading an army, he had been more than Cromwell, and Ireland not less than England. As it was, he saved her by his courage,—improved her by his authority,—adorned her by his talents,—and exalted her by his fame. His mission was but of ten years; and for ten years only did his personal power mitigate the Government; but though no longer feared by the great, he was not forgotten by the wise; his influence, like his writings, has survived a century; and the foundations of whatever prosperity we have since erected are laid in the disinterested and magnanimous patriotism of Swift.”(*b*)

(*a*) There are two very good pictures of Stella in Dublin, on which, with other circumstances of the like nature, we shall remark in another place. Stella bequeathed her fortune of £1000 to endow a chaplaincy for Steevens’ Hospital, so long as the Protestant religion is that established in Ireland.

(*b*) See a tract written by the Hon. John Wilson Croker.

ART. II.—*A Memoir on the Use of Auscultation in the Treatment of Labours.* By ALFRED H. M'CLINTOCK, M.D., F.R.C.S.I., Ex-Assistant of the Dublin Lying-in Hospital, Vice-President of the Dublin Obstetrical Society, and Lecturer on Midwifery, in the School of Medicine, Park-street.

[Read before the Dublin Obstetrical Society.]

It may be laid down as a general rule, to which there are but some trifling exceptions, that the greatest strides of advancement in medical science have been the result of improvements in our means of diagnosis. In virtue of this principle it is that Laennec's grand discovery constitutes an epoch so remarkable in the history of medicine, and has gained for him a reputation of such wide extent and permanence. Now the discovery of the foetal heart's sounds by Maior and Kergaradec was an event of analogous importance in the history of obstetric science; for though, strictly speaking, it must be regarded as the result of a special application of stethoscopy, and therefore a fact arising out of Laennec's previous disclosure, yet this should not diminish the credit due to these investigators, or detract from the honour to which they are so justly entitled for the immense advantages that have been conferred on midwifery through the exercise of their ingenuity and research.

An entirely new field was thus opened for auscultatory observation. At first it was supposed that the sole utility of this addition to our knowledge was the aid it renders us in detecting the existence of pregnancy, and distinguishing this state from the many real diseases and feigned conditions with which it may be, and unfortunately often is, confounded. If its advantages had extended no further, it would still have been a discovery of unquestionable value, and would justly have ranked amongst the most conspicuous modern improvements in obstetric science. But, happily, auscultation of the gravid uterus has not been restricted to this one object of the diagnosis of pregnancy; for later investigations have shewn that the

careful employment of the stethoscope is capable of affording many practical indications of great value in the treatment of labours, chiefly from the information which by its means we can obtain regarding the life or death of the foetus during parturition,—a question, I need hardly say, of considerable moment, and the decision of which very generally exercises great influence both upon the time for interference and the choice of instruments.

Here I cannot help expressing unfeigned surprise, that though the admirable works of Dr. Evory Kennedy and Dr. Collins have been now so many years before the profession, the importance of the stethoscope in the management of labour cases does not yet seem to be at all sufficiently appreciated; nor has the subject received from authors upon midwifery that share of attention which its intrinsic merits deserve, or which the recommendation of two such names should have entitled it to.

Dr. W. O'Brien Adams, indeed, has recorded his testimony in favour of the practice(*a*); and Professor Murphy, of London, has done the same in his recently published Lectures: but the writings of Ramsbotham, Rigby, Lee, and Burns, &c., though so full and comprehensive upon every other matter, and deservedly ranking amongst the standard obstetrical authorities of the day, give upon this subject scarcely any information. There can be no question but that to Dr. Collins and Dr. Kennedy belongs the merit of having, in these countries at least, first taken advantage of Maior's discovery, and brought it to bear successfully on the treatment of some of the most perplexing cases that we meet with in the course of midwifery practice(*b*). Indeed, so far as my researches go, they would

(*a*) Dublin Journal of Medical Science, vol. iii. p. 65.

(*b*) It is gratifying to know that the Dublin school of medicine took the lead in this very important matter, in these countries. Dr. John Ferguson first called the attention of the profession to the discoveries of Maior and Kergaradec. Dr. Evory Kennedy, who investigated this subject with great

incline me to believe that the physicians to the Dublin Lying-in Hospital were the first who extensively used the stethoscope in practical midwifery, or attached importance to its indications in the treatment of labours. It should, perhaps, be stated, that in the year 1831 M. Bodson brought a memoir upon this subject under the notice of the *Académie Royale de Médecine*, in which he endeavoured to prove that auscultation of the foetal heart furnishes us with very certain means of knowing whether the child's life be in any danger from the continuance of the labour; further adding, that if the result of our examination lead us to apprehend such a condition of the foetus, it is a sufficiently strong ground for the employment of the forceps. This paper was unfavourably reported on by M. Dubois(a), who considered it quite impossible that we could form any correct estimate of the child's strength by stethoscopic examination, and he, therefore, denied that such should be received as an adequate reason for using the forceps.

In writing the present memoir, my chief design has been to communicate faithfully and impartially the results of my observation of the use of auscultation in the management of labours, and thereby to contribute (even though it be but a fragment) towards the advance of our knowledge in this field of stethoscopic inquiry. I must here remark that the materials which form the substance of this paper were collected, almost exclusively, from what came under my own immediate notice in the wards of the Dublin Lying-in Hospital, during the period of my official connexion with that Institution, under the auspices of its present Master, Dr. Charles Johnson. To attest the importance of these facts, and to be the means of making them more generally known, is to me a sufficient re-

zeal and ingenuity, shewed its valuable influence not only on midwifery, but on medical jurisprudence; and Dr. Collins's laborious and most valuable Report upon his seven years' mastership completely established its utility and importance in practical midwifery.

(a) *Archives Generales*, vol. xxvii.

ward; and should this article have the effect of directing closer and more earnest attention to the subject, I shall consider myself amply recompensed.

When seeking for the foetal heart at the commencement of labour, it is very generally found in one or other iliac fossa,—more commonly the left. The precise locality in which it is heard depends mainly upon the position of the foetus *in utero*, the maximum of its intensity almost always corresponding to the part of the uterus with which the child's thorax is most closely in contact. This, as a general rule, holds good, and its application to the purposes of diagnosis admits of ample illustration, as shall presently appear.

In ordinary vertex presentations the *back* of the thorax is the part most closely applied to the uterus, owing to the position which the child's body habitually holds in these cases,—the legs being doubled up on the abdomen, the chin depressed on the chest, and the whole body bent forwards, so as to present a considerable convexity on its posterior part. Hence it follows, that, in the first and second positions of the head (where the back of the child is anterior), we may expect to find the foetal pulsation most audible in the left and right inguinal regions respectively, whilst in the third and fourth positions it should be more posterior towards the woman's loins. Experience has convinced me that this is pretty uniformly correct; and the concurrent testimony of Kennedy, Nægèlé, Anderson, and others, tends to confirm it. The rotation of the head, even, from the third position into the second, and the fourth into the first, may be sometimes traced with tolerable accuracy by making successive stethoscopic examinations, and noting the changes in the situation of the foetal heart. In facial presentations, owing to the attitude of the child, the *front* of the chest is the part which lies most contiguous to the uterine parietes, and the situation of the foetal pulsations have been found to agree therewith, being audible anteriorly (in the iliac region) when the head holds the mento-pubic position,

and rather posteriorly when it is in the opposite or mento-sacral position.

As regards breech presentations, I have very frequently verified the observation of Dr. Collins, that, in such, the foetal heart is most distinctly heard near the umbilicus of the mother(*a*). The same remark equally applies to footling cases. I have practised auscultation in only two or three instances of arm presentation, and in these the foetal pulsations were not audible so high up as the umbilicus, though somewhat above the natural situation.

I have thought it well thus briefly to state the result of my experience of the use of the stethoscope in diagnosing the different presentations and positions of the child, because some continental writers seem to attach great weight to its indications in determining this question. I would beg leave, however, distinctly to state my conviction, that the information derivable from this source is much too uncertain and fallacious ever to be put in comparison with the touch, or to justify our relying upon it alone in a matter of such vital importance. At the same time I may consistently add, that, in dubious cases, it is well deserving of employment as an auxiliary. A question here presents itself for solution, namely, can we always succeed in discovering the foetal cardiac sounds during labour, supposing, of course, the child to be alive? To this I would answer, yes; but then the examination, to be adequate, must be made by one accustomed to obstetric auscultation, and who carefully explores every region of the abdomen, and repeats the investigation twice or thrice, if necessary, before coming to any conclusion. Professor Anderson, of Glasgow, states, that, out of 180 pregnant women at the full time, whom he auscultated, he only failed in twelve instances to detect the foetal pulse, and in these twelve alone the child was dead-born(*b*). And of the many hundreds of cases in which I exa-

(*a*) Practical Treatise, p. 39.

(*b*) Lond. and Edin. Monthly Jour. of Med. Science, Feb. 1844.

mined for the foetal heart, as a part of my duty when assistant in the Lying-in Hospital, I can conscientiously state that there were, at most, only two or three instances in which the child's vitality was not detected at some period before delivery, and, in each of these exceptional cases, it was mere curiosity, and not any prospect of advantage, that led to my using the stethoscope. I have said "at some period," because, in the first stage of labour, and whilst the membranes are yet unbroken, a failure may occasionally take place; but, after this event, the uterus contracts on the child, and the points of contact are so multiplied, that the probability of our succeeding is then greatly increased. No doubt some trouble and a little patience are occasionally required in the investigation, but such must always be the case where precision of diagnosis is the object to be attained. In support of this assertion I need only allude to the examination necessary for the accurate diagnosis of any disease of the chest,—even that most easy of recognition. But I feel persuaded no conscientious man would ever make this a rational objection to the employment of the stethoscope, or even give it a moment's consideration, where life and character are, in any degree, at stake.

The existence of twins *in utero* may sometimes be very plainly and unequivocally demonstrated by the use of the stethoscope; in fact, this is the only way by which we can be assured of such being the case, before the birth of one of the children. To establish this diagnosis, it is not sufficient, however (as Nægèlé has stated), to hear foetal pulsations at two separate parts of the abdomen, for though this is certainly strong presumptive evidence, yet, to make it conclusive, there must be *a want of synchronism in the beats as heard at the two points*. The reason for laying down this rule is simply this:—that in uniparous females we may occasionally hear the foetal heart at two or more points very remote asunder, and separated even by an interval in which no pulsation is audible.

Now, in all the instances hitherto brought forward as illus-

trating the use of auscultation, the reader may perceive that its indications are uncertain, and liable to fallacy, and that the benefits arising from its employment have reference chiefly to the position, or presentation, of the child, points which can be ascertained sufficiently well by other and simpler means. Even the diagnosis of twins is more a matter of curiosity, and a proof of the auscultator's skill, than of any real or solid advantage, inasmuch as this information does not exert any influence upon the practice before the birth of the first child.

Let us now place this matter in another point of view, and see how far auscultation is capable of revealing the child's state, or condition, during parturition. This inquiry obviously has reference, not to the situation, but to the character of the foetal cardiac sounds, as to frequency, strength, regularity, &c., together with the alterations they may undergo during the progress of labour. At the very outset an important practical question presents itself for solution, viz.: does the child usually or ever perish in the course of a tedious labour, before the full development of those bad symptoms, which, taken together, would indicate the necessity for immediate interference? To this I would reply in the words of Dr. Collins, and, I believe, his opinion is amply borne out by the experience of all accurate observers. He writes: "I have no difficulty in stating, and that after the most anxious and minute attention to the point, that where a patient has been properly treated from the commencement of her labour; where strict attention has been paid to keep her cool; her mind easy; where stimulants of all kinds have been prohibited, and the necessary attention paid to the state of her bowels and bladder; that under such management, the *death of the child* takes place in laborious and difficult labour before the symptoms become so alarming as to cause any experienced physician to lessen the head."^(a) As regards my own personal experience, I can only say, that I have seen but one exception to the above statement, and in

(a) Dr. Collins's Practical Treatise, p. 16.

this instance the great delay was in the first stage of the labour. Of the reputed signs of the child's death it is unnecessary to say anything, their fallacy and great uncertainty being universally acknowledged.

Let us now, then, come to the main point, and put this query: "Under what circumstances can the absence of the foetal pulsations be received as adequate proof of the extinction of life in the child?" In reply to this question, I would say: that if, in the course of a tedious labour, the foetal pulsations, from having been distinct and normal, gradually become rapid and weak; and that, as labour advances, they undergo a further change of character, so that it is with extreme difficulty they can be recognised at all; and that, finally, if at a still later period the most careful examination, conducted with the same regard to accuracy, and made by the same auscultator, altogether fail to detect them;—then, under these circumstances, we may rest assured that they have ceased, and that, consequently, the death of the foetus has taken place(*a*). It cannot be too often reiterated, that the stethoscopic indications of the child's death derive their chief, if not their entire value from this *principle of comparison*. Thus, no matter how expert the auscultator may be, his finding the sounds absent, after making only one solitary examination, is not, by any means, a sufficient *datum* whereon to found an opinion. It is essential to the diagnosis that the chain of evidence be complete, and that a series of examinations shall have been made throughout the labour, in order to qualify this negative result, so that it can be received as positive information. I dwell particularly upon this point because it has been often urged, that as the proof of the child's death afforded by the stethoscope is of a negative kind, it is not deserving of confidence, and, therefore, should not be acted

(*a*) Before proceeding to examine for the foetal heart, we should always be sure that there is no retention of urine, as this would materially interfere with our object, by obscuring the sounds, or rendering them wholly inaudible.

on; but it will be at once perceived that the whole force of this objection depends upon those accompanying circumstances, whose indispensable value and importance we have endeavoured to place in their true light. Again, I have heard it argued, that the child might, perhaps, retain vitality at a time when the sounds of its heart could not possibly be recognised by the ear. To this opinion, which is quite gratuitous, the whole tenor of our experience is completely opposed; nay more, I have good reason for believing that the child is reduced to a state past recovery before the pulsations of its heart have ceased to be audible. Previous to their final cessation we have generally observed the sounds to undergo certain changes in character, of which the most prominent, as well as the most constant, is a gradual failure of their strength and intensity. Some time after this alteration has occurred, they increase in frequency, and then begin to intermit, or become irregular, soon after which they cease to be heard. The lapse of time necessary for this progressive series of changes to take place varies considerably in different cases, but we have very rarely found it to occupy less than four or six hours. During the progress of these alterations, I have very constantly remarked the sounds to be most feeble and depressed immediately after the subsidence of a pain; but in the interval, and before the recurrence of another uterine contraction, they have nearly regained their strength and frequency. I may also mention here, that it is hardly ever possible in any instance to hear the foetal heart's pulsations during the presence of an active pain,—such is my experience, at least.

How far, or in what way, the treatment should be affected by the knowledge of the child's death, it is not for me here to point out, as such inquiry would carry us beyond the scope of the present communication; but I may be permitted to say, that the considerations which prompt the use of the stethoscope in the treatment of tedious and difficult labours (of which I have been hitherto speaking), is a regard for

the safety of the mother,—a humane desire to save her hours, perhaps, of protracted suffering and danger, the most favourable issue of which can only be the birth of a lifeless child.

We next turn to a class of cases where auscultation has been advantageously employed with a view to saving the life of the foetus, by pointing out the exact time when delivery should be speedily effected by means of the forceps or vectis. The cases to which I allude are those in which the ergot of rye has been given to overcome that inertia of the uterus which proved a cause of delay in the second stage of labour.

There can be no possible doubt, but that ergot of rye administered to a patient in labour, is capable of acting deleteriously on the child. Dr. Beatty, whose experience in the use of this medicine is very considerable, strongly maintains this opinion (*a*), which is further borne out by the results of still more extended observation in the wards of the Lying-in Hospital. This injurious effect may be produced within a very short time after giving the ergot. Thus in two instances related by my former colleague, Dr. Hardy (*b*), the children were destroyed, although only twenty minutes in one case, and twenty-five in the other, elapsed from the time of giving the ergot until the foetus was born, and in each the foetal heart was loud and distinct at the time of administering the medicine. Dr. Beatty fixes the limit beyond which the child will rarely be born alive, after the exhibition of the ergot, at two hours, and to this rule I have seen but two or three exceptions. It is plain, however, that there is considerable latitude as to the time at which the ergot may commence to exert a deleterious influence upon the child, and that, therefore, so far as regards time, no limits of safety can be prescribed. Now in all these cases auscultation proves eminently serviceable from the information it affords us respecting the state of the foetus; for by making successive stethoscopic examinations at short intervals after giving the ergot, and

(*a*) Dub. Med. Jour. vol. xxii.

(*b*) Dub. Med. Jour. vol. xxvii.

closely watching any change that may take place in the character of the foetal heart's sounds, we shall have the earliest intimation of threatened danger to the child, and, by the timely intervention of art, be able to rescue it from a position which will inevitably prove fatal unless prompt delivery be effected. I have repeatedly witnessed the advantage of auscultation in these cases, and had the gratification of seeing children extracted alive, who I am satisfied would have perished, had there been no such unerring guide to indicate the precise moment at which to interfere, and beyond which delay was death. I shall relate the particulars of three cases to illustrate these observations.

CASE I.—On October 25th, 1845, I was brought to see a stout young woman who was in labour of her first child. Upon examination I found a large scalp tumour on the head, which was tolerably low down in the vagina, so that I could readily feel the ear; and I ascertained also that the head was in the fourth position of Nægèlé,—the face being directed towards the right foramen ovale. The mother's pulse was 100, and the foetal heart was distinctly heard at the right side, near the spine of the ilium. There was scarcely any uterine action, and the catheter had to be passed on account of retention of urine. I learned from the practitioner in attendance that matters had been precisely in the same state for twelve hours; so for this and other reasons which it is unnecessary here to mention, we resolved upon making trial of the ergot of rye, and accordingly gave fifteen grains of the fresh powder in the strained infusion of half a drachm. This, I may observe, is the ordinary mode of exhibiting it in the Dublin Lying-in Hospital. In twenty minutes the dose was repeated. It did not produce much uterine action, but in fifteen minutes after the last dose I found, by the stethoscope, that the foetal heart had fallen from 130 to 112, and had also become reduced in strength: seeing that there was no time to be lost, I passed up one blade of the forceps, and, using it as an extractor, speedily brought the

head through the vulva; but before this was effected I felt it revolving in the pelvis,—changing, in fact, from the fourth into the first position, in which manner it cleared the outlet. The child was still-born, but after some little trouble was perfectly resuscitated; it only survived a few days, however.

This case requires little or no comment. In thirty-five minutes from the first dose, although no active pains were produced, the stethoscopic indications shewed the imminent danger of the child; and the result proved that, had delivery been deferred for some minutes longer, its life would, in all probability, have been forfeited.

CASE II.—It was this woman's fourth child. She was of a delicate, spare habit; and had been in labour for nearly fifty hours; but for the last eight before my seeing her there was a complete suspension of uterine action. Except being very weak and enfeebled, there was no other unfavourable symptom present. The head was low down in a very capacious pelvis, and the foetal heart was loud and distinct. After trying the effect of change of position, stimulating enemata, &c., for a couple of hours, without deriving any benefit, I determined upon giving her the ergot of rye. She got two doses of the medicine, of the same strength as in the former case, at an interval of forty minutes. The second one produced some slight pains; and in twenty minutes after its administration (i. e. exactly an hour from the first dose) I found the foetal pulsations beginning to fail in frequency, and to get feeble; so, as no advance whatever had been made, I at once passed up the pubic blade of the forceps, and with ease extracted the head of a living female child.

In this instance, delivery was effected upon the first indication of any injurious influence being produced by the ergot on the child.

CASE III.—A woman, aged 30, came into the Lying-in Hospital, December 18th, 1843, to be confined of her third child. Her labour progressed favourably, though slowly, until

the head began to press on the perinæum, when the pains became inefficient, and during several hours no advance whatever was made. A dose of ergot was now given; the foetal heart then beating 160, and very distinctly. In thirty minutes after the dose, the heart's sounds had lost much of their clearness, and as the uterine action was not at all increased, a second dose of the medicine was exhibited. Within ten minutes after this (and forty from the time of the first dose) we found the foetal heart still further reduced in strength and frequency. Under these circumstances it was deemed advisable to accomplish delivery as speedily as possible, there being no prospect of this being effected by the pains. The forceps, therefore, was applied, and a female child extracted in a state bordering on asphyxia, out of which it was recovered after some little exertion.

Were it necessary I could greatly multiply the number of instances of this kind, in which, after the exhibition of *secale cornutum*, the stethoscope was employed as an exponent of the degree of danger to the child. It will be perceived from the above cases that the changes in the foetal heart's sounds, which may be regarded as indicating the child's danger, are, a failure in strength, and a diminution in rapidity; and at a more advanced period, irregularity or intermission. Dr. Hardy thinks "that in those cases where the number of the pulsations have been steadily reduced below 110, and, at the same time, with intermissions, the child will be rarely, if ever, saved, although its delivery should be effected with the greatest possible speed."(*a*)

I would here digress a moment to observe, that the contemplation of such cases as the above has led Dr. Johnson to form an aphorism respecting the employment of ergot, viz.: that since it is always apt to exert a poisonous influence upon the child, and this too within a short period after its administration, it is most desirable that the employment of the forceps be

(*a*) Dublin Med. Jour. vol. xxvii. p. 227.

practicable at the time of resorting to the use of the medicine. There can be no possible doubt but that this condition is one whose presence is much to be wished for in those cases of tedious labour where ergot is had recourse to: at the same time be it remarked, that there are other cases of this class in which the remedy may be advantageously used, as I have had many opportunities of seeing, in the practice of the Lying-in Hospital. If we compare the effects produced by ergot of rye, and by difficult labour, on the foetal heart, I think that this difference will generally be found to exist,—that the latter occasions a rise in the frequency of its pulsations, whilst, under the influence of ergot, an opposite effect is almost invariably observed, as was noticed in each of the foregoing cases. It is a remarkable coincidence that the same depressing effect is very constantly produced by this medicine on the maternal circulation.

Let us now turn to another class of cases where the use of the stethoscope may be rendered available in making a diagnosis, and, consequently, influence the prognosis and practice. It is a well-established fact that in ruptures of the uterus the child almost invariably perishes, and this too within a very limited space of time after the occurrence of the accident. I am aware that Dr. Burns has stated an opposite opinion, but upon what grounds I cannot say, as he has given no case where a living child was extracted by the forceps after laceration of the uterus. I only know of two well-authenticated instances(*a*) where a foetus was born alive after this accident

(*a*) Since writing the above, I have seen the following very brief notice of a case where the child was born alive after a tear of the cervix. “Dr. Thompson mentioned the case of a woman whose labour was brought on by a fall in the eighth month of her first pregnancy. When he saw her the waters had been away thirty-six hours; the pains were very strong; the os dilated to the size of a shilling, very rigid, and the breech presenting. While he was making an examination he felt the cervix tear under his fingers, the fissure running to the left side. The child was alive within twenty minutes.”—*Ed. Monthly Jour. of Med. Science*, April, 1847. To be complete, this case re-

had occurred. These are recorded by Dr. Collins(*a*), and I think they may almost be regarded as the exceptions which prove the rule: for in one of them the uterus burst during the delivery of a child by the feet, on account of placenta prævia; and in the other there was merely a small portion of the muscular structure of the organ rubbed away by the attrition of the child's head in a tedious labour, and no unfavourable symptom shewed itself until the fifth day. In the first of these instances there could only have been an interval of one or two minutes from the moment of the laceration till the birth of the child; whilst the second case is scarcely deserving of the name of rupture, as the bare possibility of such existing was not suspected, and no untoward symptom whatever manifested itself till after the fourth day. We cannot fairly, then, regard these cases as militating against the rule already stated, "that the child dies within a very short period after the occurrence of the accident." A knowledge of this fact at once suggests the employment of the stethoscope as a source of diagnostic information in doubtful cases of ruptured uterus; but it is more particularly valuable in distinguishing some other accidents and complications from this graver one, with which they may be confounded from their possessing many symptoms in common. To explain this more clearly, I shall briefly narrate the particulars of three of these cases, each of which occurred in the Lying-in Hospital, under the observation of many witnesses. For permission to cite these cases I must here express the sense of obligation I am under to Dr. Johnson, under whose immediate observation the facts of each of them passed.

CASE IV.—A woman, aged 34, was admitted in labour of her seventh child, December 9th, 1844. Two of her children had been dead-born at the full time. Matters progressed slowly, so that six or seven hours were consumed in the first stage of

quires to have the result stated, and the extent of the laceration more minutely described.

(*a*) Op. cit.

her labour. Two hours after this she began to vomit in large quantities a dark-coloured fluid, precisely resembling coffee-grounds; and the pains, from having been strong and regular, became weak and transient, and then ceased altogether. Her other symptoms at this time were the following: the pulse was feeble, and rather accelerated; the foetal head was high up, just at the pelvic brim, and she herself was desponding and full of gloomy apprehensions as to the result of her illness. I need hardly say that such a group of symptoms, occurring in a seventh labour, was sufficiently formidable, and well calculated to create the impression that some of the structures of the uterus had given way. Upon exploring with the stethoscope, however, we were much gratified at finding the foetal heart pulsating with its usual strength and frequency, and, in fact, possessing its normal characters. Relying in a great measure upon the correctness of this indication (of the non-existence of rupture), no active interference was had recourse to, and after eighteen hours of nearly complete suspension of uterine action, the pains recommenced, and she gave birth to a strong and healthy female child. This patient recovered slowly, but perfectly, and was discharged from the hospital on the fourteenth day.

In this instance the great practical question was, whether any laceration had taken place or not, as, if it had, every moment's delay in delivering her took so much from the chance of her recovery. I have mentioned that on this question a negative conclusion was come to, chiefly from the fact of the foetal heart's pulsations continuing unaltered, and the sequel of the case fully confirmed the diagnosis.

CASE V.—In this case the labour was rendered difficult, in consequence of the existence of a firm band at the upper part of the vaginal canal, the result of inflammation and sloughing in her previous confinement. Some time after the full dilatation of the os uteri, the pains, which had been exceedingly violent, abruptly ceased, a discharge of blood took place from the va-

gina, the pulse fell, and the woman became weak, and vomited. On examination it was found, that not only had the band given way, but also that the head (which was presenting) had perceptibly receded. This combination of symptoms excited strong fears that some laceration of the cervix uteri had taken place, a complication, I may remark, much to be apprehended in such cases as this, and of which Dr. Collins' fourth case furnishes a good example(*a*). Upon making an auscultatory examination, however, the foetal cardiac sounds were distinctly audible, and possessed their ordinary characters; and from this circumstance mainly it was inferred that the uterus was not implicated in the laceration, which opinion was verified by the result. The foetal heart subsequently ceased, though not for several hours, and then apparently in consequence of the duration of the labour. She was ultimately delivered with the perforator and crotchet; when it was discovered that the tear extended completely through the vagina into the rectum, but did not engage the os or cervix uteri. This woman recovered, and bore children afterwards.

No comment is necessary upon this case, as it speaks for itself, and shews, in a strong light, the value of the diagnostic at present under consideration. I would beg leave to draw attention to the interesting fact of the foetal heart being unaffected by an extra-uterine laceration so great as to rend a strong cicatrix, and throw the cavities of the rectum and vagina into one. These cases, which might be multiplied if our space permitted, will, I trust, be sufficient to shew the nature and extent of the diagnostic information derivable from auscultation in all instances of a similar kind.

CASE VI.—The subject of this case was a healthy young woman, who was admitted into the Lying-in Hospital, September 29th, 1845, in labour of her second child. At five o'clock, P. M., the os uteri was fully dilated, the membranes ruptured, and the pains moderate. At eight o'clock I examined

(*a*) Op. cit., p. 297.

her with the stethoscope, and heard the foetal heart in the left iliac region; at this time she was going on most favourably in every respect. At ten o'clock Dr. Hardy, my coadjutor, and I were hastily summoned to the ward in consequence of a sudden alteration in her appearance. We found her extremely faint; the pulse feeble and rapid; the pains very slight; and the child's head seemed to have somewhat receded. The most careful exploration with the stethoscope now utterly failed to detect the sounds of the foetal heart. From this combination of symptoms it was concluded that the uterus had given way, and the treatment was regulated accordingly. This poor woman died in thirty-one hours after delivery, and dissection revealed an extensive rent on the left side of the cervix uteri, involving all its textures, but not implicating the vagina. I have adduced this case chiefly to shew how soon the child may be destroyed by rupture of the uterus, as there was no great difficulty in the diagnosis. In Dr. Collins' thirty-first case (p. 267) the same fact was proved in a manner equally demonstrative, for the foetal heart had ceased to be audible within ten minutes after the occurrence of the laceration.

In the histories of the three cases just related I have been as brief as possible, and have almost solely confined myself to those points which had reference to our present subject.

In the management of labours complicated with convulsions it is often of importance to know whether the child be alive or dead, and the stethoscope may occasionally be of service in deciding this point. The principles of diagnosis here are, of course, the same as in tedious labours, but I must confess that the jactitation and restlessness so common with these patients generally proves a very great or insuperable obstacle to making any satisfactory auricular examination. When a woman is seized with convulsions at the seventh or eighth month of pregnancy, and that the attack is subdued without the immediate supervention of labour, we shall be anxiously asked by the patient and her friends, whether the child has

been destroyed, and whether gestation is likely to proceed undisturbed. Now these, to a certain extent, are important questions, and the latter of them cannot well be answered without knowing the solution of the former; for if the child be alive, there is every probability that she will go to the full term (unless, indeed, the convulsions should recur), whereas, if the child be dead, we may pretty confidently expect labour to come on within ten days or a fortnight(*a*).

I have now mentioned the chief occasions on which we have found auscultation of the foetal heart to be of service in the treatment of labours; it yet remains for me to make a few practical observations regarding the placental soufflet, and the use of the stethoscope with still-born children.

It has been asserted that, after the death of the foetus, the placental soufflet either ceases altogether, or undergoes a change of character recognisable by the ear of a practised auscultator. It is very much to be wished that such were the case, as then we should be in possession of a *positive* sign of the child's death. But candour obliges me to confess, that after making innumerable trials, and having bestowed considerable attention on the point, I have never yet been able to detect any peculiarity in the *brûit placentaire*, by which I could be led, in the remotest manner, to suspect that the child was dead. Nægèlé, in his treatise upon "Obstetric Auscultation" (translated by West), has also expressed himself to the same effect. So far as my experience enables me to judge, the only useful information it is capable of affording (independent of its evidence of the existence of pregnancy), is in those cases of flooding before delivery, in which we cannot ascertain by the

(*a*) There seems to be a curious law of the animal economy by which it is ordained that, after the death of the foetus, the uterus should not take on expulsive action for ten or twelve days, or sometimes a fortnight. How to explain this I am quite at a loss; but, from very extensive observation, I am satisfied of its general correctness. It was first remarked to me by Dr. Johnson, and I am not aware that any author has taken notice of it.

usual means the exact nature of the hæmorrhage: in other words, whether it be accidental or unavoidable. Under these circumstances, the use of the stethoscope, by acquainting us with the site of the placental attachment, may, as Nægèlé says, dispel all the obscurity of the case. Examples of this doubtful kind are certainly not common, but, on a few such occasions, I have seen the stethoscope advantageously employed; and Dr. Churchill informs me, that, under similar circumstances, he has used it with a like satisfactory result. This decisive evidence is not always to be expected, however, for the placental murmur may not be heard at all, though this is extremely rare; or it may be heard in such a locality as would still leave it uncertain whether the placenta was presenting or not; nevertheless, in all doubtful instances, its careful employment should never be omitted.

M. Stoltz (of Strasburgh) has described a uterine sound, which he only observed when the child was dead, and which he attributes to the decomposition of the liquor amnii. He characterizes it as “*un bruissement sourd et irregulier, comme un bruit,*” &c.(b) This sound, or any thing approaching to it, I have never heard.

Nægèlé noticed, in some few cases of hæmorrhage from presentation of the placenta, a singular peculiarity in the character of the soufflet. “The sound,” he says, “was of ordinary intensity in the inguinal regions, but extended thence over the whole uterus, and even the smaller ramifications seemed to concur in its production.”(c) This I never observed, though on several occasions I auscultated the uterus during, as well as before and after attacks of hæmorrhage depending on the implantation of the placenta over the os uteri.

Dr. Kennedy has attached a high value to the use of the stethoscope, for the certainty with which it enables us to pronounce upon the actual condition of still-born children; and we entirely concur in the truth and importance of his remarks

(b) Cazeaux, *Traité de l'Art des Accouchements.* (c) Op. cit.

upon this subject; for we have seen many children resuscitated, with whom *the pulsations of the heart, as detected by mediate auscultation*, had been the only proof of lingering vitality at the time of delivery. What the effect of such evidence should be on the physician's conduct I need not say; but it would undoubtedly prove a source of much encouragement under circumstances otherwise apparently hopeless, and at a time when he must be oppressed with the consciousness that the result of his endeavours is looked forward to with the most intense anxiety and solicitude. In thus viewing the heart's sounds as furnishing the latest proof of the existence of the vital principle, it forcibly reminds us of Harvey's celebrated dictum respecting the circulation, "*primum vivens, ultimum moriens.*"

We have seen many infants restored to animation, in whom respiration was for a long time suspended, yet we never saw a single instance where the slightest symptom of vitality could be produced, if the heart's pulsations had ceased to be audible when the child was born, which is only what might have been expected. I think it may be safely asserted, that, had the stethoscope been used, no such accident could ever have happened, as a doctor ordering a child to be removed as dead, which afterwards reanimated without any assistance.

In some still-born children the pulse was so low as 55, but by prompt and judicious means animation was restored, whilst in other instances I have seen the pulse rise from this low rate to upwards of 100, under the employment of artificial respiration, &c., but as soon as this was stopped, the velocity of the circulation would quickly diminish, again to become accelerated on inflating the lungs; and thus I have seen matters go on alternating for two hours and upwards, and yet the great object of our exertions not be ultimately attained. Such cases as these (of which I have witnessed many) are but repetitions of the celebrated experiments of Vesalius, Hooke, and Brodie, by which they demonstrated that artificial respiration

could keep up the circulation for a long period after animal life had been completely destroyed.

I shall now briefly sum up, in the form of aphorisms, the chief points of practical interest contained in the preceding memoir, first reminding the reader that upon each point I only speak with that degree of confidence which my personal experience and observation warrant.

1. Where the foetus is alive, the sounds of its heart may be always detected at some period of the labour, by any one of ordinary proficiency in obstetric auscultation.

2. The precise region of the abdomen in which the foetal heart is heard, affords auxiliary evidence of the position of the child *in utero*, but can never be relied on alone for determining this point, or supersede the necessity for vaginal examination.

3. In presentations of the lower extremities, whether it be breech, foot, or knee, the foetal heart is usually heard most distinctly in the vicinity of the umbilicus of the mother.

4. Conclusive auricular evidence of the existence of twins *in utero* is only to be drawn from the inequality in the number of the beats of the two foetal hearts, and not merely from any difference as to their respective positions.

5. If, in the course of a tedious or difficult labour, the foetal cardiac sounds, from having been distinct and clear, gradually become feeble and obscure, and ultimately inaudible, even with every precaution against deception; under these circumstances, their absence is entitled to rank as positive evidence of the child's death; but without the previous successive examinations this conclusion would be destitute of any positive character.

6. In cases where ergot of rye has been given to hasten delivery, auscultation of the foetal heart is the only certain way by which we can know when the medicine is commencing to exert an injurious influence upon the child; consequently the stethoscopic indications are alone entitled to confidence for

determining the exact time when the state of the foetus calls for and justifies interference.

7. In cases simulating rupture of the uterus, the persistence of the foetal heart's sound is a strong proof against the occurrence of the accident, and the more advanced the period at which they are audible after the setting in of bad symptoms, the more conclusive is the evidence that rupture has not taken place ; whilst, on the other hand, the sudden cessation of the foetal pulsations, where they had been distinctly audible a short time previously, would strongly corroborate other existing symptoms of laceration of the uterus.

8. After an attack of puerperal convulsions in the seventh or eighth month of pregnancy, where labour has not immediately supervened, the prognosis should be very much regulated by the state of the foetus ; for if it be proved by the stethoscope that the child is alive, we may venture to hope that gestation will go on undisturbed (unless the convulsions recur) ; whereas, if the child has been destroyed, its expulsion will take place, most probably, in ten or fourteen days from the date of the convulsive attack.

9. No certain conclusion regarding the state of the foetus can be drawn from the characters of the placental soufflet.

10. In cases of flooding before delivery, observation of the placental bruit may supply useful diagnostic information, by pointing out the part of the uterus to which the after-birth is attached, and thereby shewing whether the hæmorrhage be accidental or unavoidable.

11. Auscultation of the heart in still-born children more accurately acquaints us with the state of the child's vital powers, than any other source of information, and is, therefore, well deserving of employment in all such cases.

ART. III.—*Observations upon Urinary Fistula*. By WILLIAM COLLES, F. R. C. S. I., Surgeon to Dr. Steevens's Hospital.

THE term urinary fistula is applied to that form of disease which consists in a communication existing between the canal of the urethra and the external surface, by means of a fistulous passage; and as this fistula generally opens in the perinæum, the disease has been termed “fistula in perinæo.” But we must at once perceive the impropriety of adopting a name which would render necessary the division of a disease into two classes, differing from each other only in a very trivial and unimportant point; for whether the fistula opens in the perinæum or scrotum, over ramus of the pubis, in the thigh, or beside the sacrum or anus, —in all of which situations the external opening has been found, —it can make little or no alteration in our diagnosis or treatment.

Of these urinary fistulæ we may distinguish two very distinct forms: one having its origin in a purely local cause, and the other constitutional. The former may arise from an obstruction to the free passage of the urine through the urethra; and as it is that form which is chiefly noticed by authors, we shall first consider some points in connexion with it. This obstruction may be caused either by a stricture of the urethra; or it may be a consequence of rupture of the canal, which, being torn across, has been allowed to unite obliquely; or it may arise from a total obliteration, owing to sloughing or ulceration of a portion of the canal.

When the fistula is a consequence of stricture, it is generally found in those cases in which the stricture has been neglected, allowed to become very firm, hard, and close, or when it has been improperly treated by the too frequent or too forcible introduction of instruments, or by the incautious application of caustic.

The disease commences by the formation of an acute ab-

scess, attended with considerable fever and constitutional disturbance, increased frequency in the calls to pass water, and increased difficulty and straining in evacuating the bladder, attended with severe scalding pain in some one spot of the urethra. The patient complains of a considerable swelling in the perinæum, which prevents the urine flowing, and obliges him to keep the legs wide asunder, as any attempt to close them would be attended with great suffering from the pressure on the abscess. Hence he must lie constantly on his back, with the knees flexed and far apart. On examining the part, we find a general fulness in the perinæum, not amounting to a circumscribed tumour; sometimes a blush of redness, but often no discolouration of the integuments. No sense of fluctuation is afforded to the fingers, but rather a boggy feel, amounting at times to that œdematous state which retains the impressions of the fingers. The abscess, being bound down by the fascia, wants the distinctive marks of a common superficial abscess.

Here we cannot wait for the abscess to point or become more evident, we must open it at once and freely. The urine will pass through the incision, sometimes immediately after, and sometimes not for two or three days.

The opening gradually closes, till there only remains one large granulation through which the urine flows; the parts round the fistula become consolidated and hard; the skin puckered, giving the appearance of a neck round the orifice; and the fistula comes to be lined with a peculiar membrane, and is permanent.

The theory offered to explain the formation of the abscess is this, that from the narrowing of one point in the urethra, and the consequent increased force required to evacuate the bladder, the urethra comes to be dilated immediately behind the stricture; that here a drop or two of urine constantly remains; this produces irritation, and finally ulceration, in the

spot; that the urine escapes through this ulcer into the cellular membrane beneath, disorganizes it, and thus causes the abscess.

This theory may explain the origin of this abscess in many cases, but it cannot apply to all. Thus we at times find the internal opening of the fistula to exist on the upper or pubic surface of the urethra. Again, we often find it at a considerable distance behind the stricture and the dilated portions of the urethra. If this explanation were true we would have the pus, when fully formed, passing through the urethra, and the case often ending in the formation, if we may be allowed the term, of a "blind external fistula." We should also much oftener have extravasation of urine, for the abscess causes increased straining, and increased difficulty in the evacuation of the bladder, and, if the ulcerated opening exists, it must afford a ready exit to the urine. Neither can it account for the fact, that we in general do not find urine pass through the incision till two or three days after the abscess is opened. Or again, why is it that the abscess, when opened, will sometimes heal and remain closed, no urine passing through it!

We are told that the disease, when fully formed, is easily distinguished, by a red papilla in the perinæum, with surrounding hardness; and that when the patient passes water the urine will be seen to flow through it. This is not, however, always the case, for the fistula may open near the anus, and be so small and tortuous that the urine will not appear externally till some time after the act of micturition shall have ceased. We have known a patient make water before leaving home, and not perceive any urine pass through the fistula till he had walked two or three streets, and we came to examine and make pressure on the fistula.

My father was in the habit of relating a case in which he could not discover, on the closest examination, any fistulous opening; when the patient undertook to convince him that such really did exist, he wiped the perinæum dry, applied a

piece of blotting paper to it, passed water, and then shewed the stain on the paper: the quantity could scarcely have amounted to a drop, and the opening could not be seen, yet the man suffered as much annoyance as if the disease was much more extensive.

In examining these fistulæ we cannot, as in fæcal fistula, rely on the probe as a satisfactory guide; for though it will sometimes pass through the external opening and touch a solid instrument in the urethra, yet, in the majority of cases, the course of the fistula is so tortuous, and leads off in a direction so distant from the urethra, that no probe can follow it in all its windings. Hence arises the great difficulty to trace and discover the exact situation of the internal orifice of the fistula, which, if we could find, would often afford us most material assistance in our further proceedings.

In speaking of the treatment of the disease, surgeons tell us that the urine, constantly flowing through these fistulæ, alone prevents them from closing; and, therefore, it will be necessary to prevent this, and that it can only be effected by causing the urine to pass through a hollow instrument, either constantly worn in the bladder, or introduced every time the patient wishes to pass water: and that this and this alone can effect a proper cure. This is certainly a severe method of proceeding, and not always necessary or successful; and by it we confine the patient to his bed or to his home for five or six weeks, and we often find his health become seriously impaired from the confinement. The constant presence of the instrument causes irritation, inflammation of the bladder and urethra, frequent calls to pass water, straining, and mucous deposits, with some streaks of blood in the urine. If we still persist in retaining the instrument, the patient is likely to be seized with that form of fever denominated "urinary fever," a most severe and often dangerous complication. If we resort to the introduction of the instrument every time the patient wishes to pass water, we often find we do more harm than good: we

irritate the urethra, the introduction of the instrument becomes more difficult, and we find, after a time, the stricture much increased in extent, irritable, and close, or that, perhaps, other strictures and fistulæ have appeared.

Hence I would say, that as the stricture is the cause of the fistula, we should direct our chief attention to the removal of it by the simplest means : if we introduce a catheter or bougie perhaps every second or third day, we will find that according as the stricture is dilated the fistulæ will close, less urine passing through them each time. If we find this method fail, after a fair trial, we can then resort to the constant wearing of a catheter, when the urethra will have become more accustomed to its presence.

It has been at times found that even where the catheter has been constantly worn, the fistula has made little or no progress towards healing, although the urethra has been fully dilated, and not a drop of urine has passed through the fistula for several weeks. Here, if we remove the catheter, and allow the patient to go about, we will find, when, perhaps, we are considering about our further proceedings, an evident improvement in a few days ; the discharge both of urine and pus from the fistula becomes less, the surrounding hardness disappears, and the case goes on to a complete cure.

We are by some recommended, in order to expedite the closing of those fistulæ, to use various caustic applications ; but if we use a solid caustic we find we cannot get it much farther than the external opening, as the canal is so small and tortuous ; and to be effectual it should be applied to the internal opening. And when we consider the course of these fistulæ, and the force that would often be required to drive an injection to the urethra, a surgeon would dread the fluid caustics becoming extravasated into the cellular membrane, and producing incalculable mischief.

Reasoning from analogy of fistulæ in ano, we have been told to divide these fistulæ into the urethra, and make them

heal from the bottom ; but we will find very little analogy between the two operations, and besides, we cannot find, and therefore cannot divide, the internal orifice of these fistulæ.

The various methods recommended will sometimes fail in effecting a cure of the disease, and we are obliged to resort to an operation. This may become necessary, either from the nature of the obstruction preventing the use of an instrument,—being one of those strictures which close so rapidly as to lose, in one or two days, the labour of weeks ; or of that broad, cartilaginous kind, which will scarcely yield to any instrument ; or from the continuity of the canal being completely interrupted, either from the total want of a greater or less extent of urethra, from sloughing or ulceration ; or from the torn ends of the canal having united obliquely and irregularly : or it may become necessary from finding the patient's constitution suffering, urinary irritation succeeding, fresh fistulæ forming, and, perhaps, diseased bladder threatening, in consequence of the continued existence of the disease. From reading the works of authors we would be led to suppose the necessary operation a simple one, and easily performed, yet when we come to practise, and see the practice of others, we find it to be a most tedious and difficult proceeding ; and we have known the patient put to bed, after being on the table a great length of time, the surgeon not being able to attain his object.

In this the great, and sometimes unattainable object, is to reach the urethra behind the stricture, when an instrument will not pass the obstructions from before. Here we have nothing to guide us to the part. Our knowledge of anatomy is of little avail, the parts are so thickened, hard, and altered in structure,—being often like cartilage,—that they close on the knife after each incision : if we dilate the wound by means of spatulæ, we can only apply them to the superficial integuments ; —the urethra does not form a rounded tube, it is contracted, the opposite sides lie in close contact, and can with difficulty be distinguished. The corpus cavernosum of the penis, a fis-

tula, or even the ramus of the pubis, have been cut on, and mistaken for the canal.

We have been told to pass a staff down to the stricture, cut on this, and then divide the stricture: but when the staff is held pressed on the stricture, our incision sets it free, it slips out of the urethra, and we cannot again apply it to the exact spot it previously held. This plan may, however, succeed when we have a skilful and attentive assistant, who passes the staff to the stricture, draws up the penis well upon it, and then steadily presses the staff, not on the stricture, but against the arch of the pubes; thus, when we cut on the end of the staff, the parts remain fixed, and the staff and stricture retain their relative position; we then direct the edge of the knife so as to divide the stricture beyond the point of the staff, and we sometimes find that the instrument will then readily pass on to the bladder.

Again, we are told that we will reach the urethra by following the course of the fistulæ; but they are often so tortuous, and in such number, that no probe or knife can follow their windings.

When the fistula is single, and all, or most, of the urine passes through it, we will, at times, be able to dilate the fistula till we can pass a small gum elastic catheter into the bladder, and then proceed to the further steps of the operation. My colleague, Mr. Cusack, lately succeeded in restoring, by this means, a urethra which had been previously torn across by a fracture of the pelvis.

When we cannot, by any of the methods recommended, find the urethra behind the obstruction, we must resort to a more tedious operation. We place the patient as in the operation of lithotomy; use no staff or instrument in the anterior portion of the urethra; let an assistant hold up the penis and scrotum, but make no pressure; leave the parts as much as possible in their relative positions; make a free incision along the

raphe of the perinæum; deepen the incision by cutting always in the same line till we have got through a depth of parts previously calculated on, recollecting that the apparent depth at which the urethra lies is much increased by the hard and unyielding nature of the altered structures through which we cut. Sometimes we will feel, by the want of resistance to the point of the knife, that we have entered the urethra; often we have not even this to guide us: however, having carried the incision deep enough, we proceed to search for the urethra. The eye will seldom be able to distinguish it at the bottom of the incision; sensation, conveyed by the finger, or a bent probe, will often inform us if we have to cut deeper, or the probe may enter the opening in the urethra, and pass on to the bladder. We are told, by desiring the patient to pass water, that we will perceive the opening in the urethra, if it has been effected; but it is seldom that a patient, suffering under a protracted operation, can direct his attention to exert the combined actions necessary to this evacuation, and even if he did, we can see the urine welling up, and filling and overflowing our incision, but we fail in seeing the opening in the urethra from which it issues. Having got the probe passed, and on it directed a gum elastic catheter, into the urethra, behind the stricture, the remainder of the operation is, comparatively, simple. Pass a probe from the incision up the urethra, till we arrive at the obstruction; then introduce a staff into the anterior portion of the urethra; divide the parts between the two instruments, until one will freely pass into the portion of canal occupied by the other; then cut off the head of the catheter, which is lying in the bladder, fix this anterior portion of the catheter to the end of the probe, and thus pass it through the orifice of the penis. In two or three days' time we will be able to introduce a larger instrument into the bladder, the stricture will be removed, and the parts will heal gradually and firmly.

Such is the form of fistula arising from obstruction, generally the only one, noticed by surgeons(*a*). Yet we often meet with the disease arising from a local cause, but not from stricture. In a former communication I related some cases where fistula was connected with disease of the prostate gland, and there a large-sized catheter would readily pass. Fistula is seen connected with ulcerated opening of the neck of the bladder, and other diseases of that viscus, or with a large abscess situated between the bladder and pelvis. It has followed, at times, some rough or awkward introduction of instruments, where there has been reason to fear a false passage has been produced. We also have seen fistulæ where no cause could be assigned for their appearance. This latter form generally arises far back in the urethra, runs close to the rectum, and will sometimes open into that viscus, and thus materially add to the patient's sufferings; for every time he goes to pass water, some of it will escape into the rectum, and will either run down the thighs, or the patient must evacuate it as if at stool.

In this form of disease, of course, our first endeavour should be, from the symptoms, and an accurate examination, to discover the original disease, and try to remove it, for till it is cured little can be done with the fistula; till when our efforts to remove it by the ordinary methods will, we regret to say, too often fail.

We will sometimes succeed by making the patient wear the catheter; sometimes the operation will cure it. And here the proceeding is simple, for we can readily pass a staff into the bladder, and thus have a sure and evident guide to our incision; we can readily divide the fistula and urethra, and make the wound heal from the bottom. Yet in this form of fistula the operation must oftener fail than in the former case. It may heal for a time, but will be liable to return on the slightest provocation.

(*a*) Dublin Journal of Medical Science, vol. xxvii. p. 372.

I relate the following as a well-marked case of some of the difficulties attending this form of disease.

Mr. D., aged 45, has been for twenty years labouring under urinary disease, which he attributes to a surgeon who treated him for stricture, forcibly introducing the catheter, and making a false passage, since which time he has however enjoyed months of comparative ease, followed by weeks of urinary irritation. His present attack commenced, two or three weeks since, by rigor, followed by profuse perspiration, and passing large quantities of purulent mucus, with great pain. The urine flowed, not in a stream, but drop by drop, with such straining as often to bring on a discharge of the contents of the rectum; this was followed by a swelling in the perinæum, close to the anus. It was opened, and in a few days the urine passed through it. He then complained of what he called a spasm of the rectum every time he passed urine; this was very severe, and would last two or three minutes; soon after he found some urine pass into the rectum, so that it either ran down his legs, or he was obliged to pass it off as if at stool. In London, Sir A. Cooper taught him to pass the catheter himself. During all this last attack he could pass a full-sized silver catheter, No. 12, with the greatest ease, but he remarked, that before the instrument reached the bladder, the urine would pass off, and most of it through the fistula. He then endeavoured to keep the gum-elastic catheter in the bladder, but he now found, no matter what was the size of the instrument, that towards the end of the evacuation he would be forced to strain, and the urine would pass by the sides of the instrument through the fistulæ.

These means failing, the operation was had recourse to. A large staff was introduced into the bladder, the fistula and urethra divided on it, the incision carried on to the prostate gland, and the wound made to heal from the bottom: yet it was not till some time after that the parts became consolidated.

Having now described the form of fistula which arises either from obstruction to the free passage of the urine, or

where the urethra is free, still has a local disease as its cause, I will next proceed to consider another form which was first noticed by my father in his clinical lectures, and has not received the attention it merits. It differs materially in its symptoms and treatment from those already mentioned, which may be considered as local: this form being more intimately connected with a deranged constitution.

If the patient be an intelligent man, who can give a clear account of his disease, we learn from him that the formation of matter in the perinæum was not attended with any inflammatory fever, nor with the throbbing, severe pain usually attending acute abscesses; but he will tell us that he, perhaps, occasionally noticed some scalding in micturition, some small tumour in the perinæum, which did not give him much uneasiness, or attract his attention; and that the progress of the abscess was slow, a considerable time existing between its first appearance and its opening. At times the patient will have no knowledge of the existence of the abscess till it bursts, or arrives to a very considerable size. He will tell us that he enjoys good health, but on a closer inquiry we will find that he has been for some time in a low, feverish state. His pulse is much quickened; he has considerable thirst, with slight impairment of his appetite, and loss of flesh, probably more remarked by his friends than by himself; when questioned, he often declares himself in perfect health; the countenance is pale, with, probably, a tinge of yellow; the nails do not exhibit the healthy state of the subjacent part, but resemble a thin, transparent layer of ivory, laid on a surface of a purple hue. In many such cases there is some affection of the chest, generally cough, with copious expectoration, some distress in breathing, particularly when attempting any extra exercise.

If we turn our attention to the local appearances, we observe the orifices of the fistulæ rather patulous, but no fungous papillæ projecting from them; there is very little hardness round the openings, or leading from them; and no puckering

of the skin, forming a kind of neck round the orifice. They generally exist in great numbers externally, and appear as if punched out of the skin; but we seldom find more than two openings internally. If we introduce a probe into one of the openings, we find it passing away from the urethra; often, from the same opening, it will run in different directions. When we come to examine the urethra of the patient, we cannot discover the existence of any stricture; and we can pass a full-sized catheter into the bladder without meeting any obstruction. Such is the history we receive from the patient, and such are the symptoms we observe in the form of disease, and we see that in both respects it differs materially from that previously described. In the one the general health is good; the abscess commences with inflammatory fever, is acute in its course, and causes much suffering; the fistulæ are few in number, marked by a red fungous papilla; there is an impediment in the introduction of a catheter, or evidence of some other local disease. In the other the health is much impaired; generally old chronic cough, with expectoration, is present; a low, sinking feverishness exists; the abscess is chronic, continuing for a long time, often unnoticed till it opens; the fistulæ are in great numbers, presenting merely wrinkles or perforations in the skin; the urethra is so free that a large catheter will pass readily into the bladder.

If, according to the generally received opinion and established rule of practice, we were to promise this patient to effect a cure by making him wear a full-sized catheter in the bladder, with the view of keeping the fistulæ free from any passage of urine, we would certainly have to suffer the mortification of a disappointment.

Should the surgeon be rash enough to undertake any operation with a view to the cure of the fistulæ, he would not only signally fail, but would render the state of the patient worse than before. We have known a surgeon operate in such a case, and the patient return to the country, the urine flowing

through the large wound, which had not made the slightest effort to heal. We regret that we have no mode to guide us to the successful treatment of these cases. Of course, on first visiting the patient, the surgeon is tempted, both for his own satisfaction and also his patient's, to introduce a catheter; but even this proceeding requires caution, for we know that in such broken-down constitutions this operation, performed as carefully and gently as possible, has excited urinary fever, and even led to a fatal termination. Having satisfied ourselves as to the state of the urethra, we should be cautious how we repeat the operation; for if the catheter be introduced too frequently, even should the patient escape the urinary fever, still we may induce an irritation, and unhealthy action in the urethra, which may give rise to stricture.

Our local applications will, therefore, be more with the view of alleviating the sufferings of the patient, and allaying local irritation and inflammation. If we direct him, each time he goes to pass water, to make pressure on the part, or to keep a moderate constant pressure on the fistulæ, so as to prevent so much of the urine passing through them, we will find, after a time, that some of them will become much smaller, and even close. This, and the occasional introduction of the catheter, at long intervals, should be our principal local remedies. Our chief reliance, however, must be in an improved state of the general health, and the removal, or alleviation, of the cough by those various means used in such cases, and which it is not our province here to mention.

Should we be so fortunate as to effect the removal of this, and restore the patient to good health, we shall find that the fistulæ will close almost without any local treatment; if not, we will have him in a condition to bear the application of such other measures as we would expect to succeed.

We will find, in too many of those cases, that the chest affection, or other organic lesion, will go on, and in the end, phthisis, or hectic fever, will carry off the patient.

By way of illustration I select two out of a number of cases of which I possess full notes, both being examples of this form of fistula, though differing in many minor points.

Mr. E., aged 40, an active, country gentleman applied to me some time ago. On removing a large linen cloth which was wrapped round the penis and scrotum, and wiping away a most profuse discharge of purulent matter, I saw a number of fistulous openings, commencing at the glans penis, and extending to the anus, six or eight in front of the scrotum, and from fifteen to twenty behind it: they appeared as if punched out of the skin. When he passed urine some of it flowed through each of these openings, and was a cause of considerable annoyance, but he did not complain of any painful condition of the parts. He was naturally of a dark yellow complexion; this now contrasted strongly with the pearly whiteness of the tunica adnata of the eye; the nails were of a purplish colour, and much curved; he was naturally of a spare habit of body, but was now perceptibly wasting in flesh; breathing not much disturbed, yet he had a good deal of cough, with a copious, free expectoration; pulse very quick; had much thirst; appetite, however, good. He gave a very indistinct account of the manner in which the complaint began; he never had any retention of urine; the formation of the abscess took place without any severe inflammation or pain in the parts.

He was most anxious to commence a course of bougies, having been told by his surgeon in the country that this would effectually cure him. After the occasional cautious introduction of the catheter, I determined to leave it in; and confined him to bed. After some days his lungs became more oppressed; fearing to persevere, I allowed him at first to move about the house, then to enjoy carriage exercise, at last to walk about with the instrument in the bladder; his cough evidently improved, though he exposed himself to cold and wet during the winter.

For nearly five months matters went on thus; the fistulæ

shewed no amendment, though the urine invariably passed entirely through the instrument; he refused to leave town, or to learn to pass the catheter for himself.

About this time, on changing the instrument, I observed that the linen which he kept round the genital organs appeared much less imbued with matter; and he said he remarked the same thing himself during the previous fortnight.

On each subsequent change of the catheter we remarked the further decrease of the discharge, and the lessening and final closure of the fistulæ. On closely observing the general health, I could also here perceive an amendment. The cough was less troublesome, the expectoration less copious, the circulation less languid: and that he had put up some flesh. In a short time the fistulæ were perfectly healed. He hunted regularly that winter; and soon after got married, and has had no return of his urinary complaints.

Here is a case of fistulæ existing to an enormous amount, without stricture, or other local disease; the local treatment did neither harm nor good; but when the general health began to improve, the fistulæ commenced to close at the same time. The very slight disturbance which the constant wearing of the catheter produced, is also very remarkable. The parts and the constitution seemed perfectly insensible to its presence.

Mr. K., aged 58, applied in July, 1845. Naturally of a spare habit; life sedentary; for many years subject to cough, attended with profuse expectoration. Says that twenty years ago he had been subject to stricture, and was since in the habit of passing an instrument for himself occasionally, but had neglected it the last winter. About a fortnight since, on going to London, he was much distressed during the passage by frequent discharges of urine and fæces. Next day he was obliged to pass water every half hour; and at Birmingham he was seized with retention of urine. He now, for the first time, perceived a tumour in the perinæum; the catheter was readily passed, the urine evacuated, and the abscess was opened. He then returned to Dublin.

When I saw him the greater portion of the urine passed through the fistula; there was a considerable discharge of matter from the urethra; and the calls to pass water were very frequent. I readily passed a middle-sized catheter into the bladder; this was followed in the evening by a rigor, and profuse perspirations; I introduced the catheter easily again in eight days, and repeated it occasionally till August, when the quantity of urine passing through the fistula was much diminished. He went to the country for six weeks, where he had a bougie passed almost daily. I now found the urethra, at the site of the fistula, had contracted so much that only a small catheter would pass. The cough considerably improved; but during the winter following it returned with increased severity, and finally proved fatal.

This case is worthy of recording, as shewing the very insidious manner of the formation of those abscesses, for the patient did not perceive it till a few minutes before it was opened; it also shews us that the catheter may be introduced too frequently, and do much mischief.

Thus we perceive that there are two distinct kinds of urinary as of fæcal fistulæ: one form local, acute, and requiring active treatment, and often operation; the other, depending on the deranged state of the constitution, not permitting much local interference, and entirely forbidding any operation for its cure. It can only be relieved by constitutional treatment.

ART. IV.—*The Propriety and practical Utility of classifying Hooping-Cough among the Exanthemata, with a new Theory of that Disease.* By JAMES F. DUNCAN, M. D., F.K. & Q. C. P., Extra Physician to Sir Patrick Dun's and Mercer's Hospitals; Lecturer on the Practice of Medicine in Park-street School, &c.

It cannot be denied, by any one at all acquainted with recent medical writings, that very little attention has been given of

late to the study of nosology. That such a circumstance should occur, at a period preeminently distinguished for the enthusiastic devotion with which every branch of medical science is cultivated, as well as for the number of brilliant discoveries to which that devotion has necessarily led, may naturally excite surprise. These discoveries, arising, as they have done, from the combined possession, by the same individuals, of purely professional knowledge, with those attainments in general science that constitute a liberal education, would lead us to expect that a scientific classification of diseases would occupy a considerable share of attention in the minds of men thus qualified to undertake the task.

Various reasons may be adduced to account for a result so little to be anticipated. In the first place, it is not improbable that the exclusive solidism which has prevailed in the schools till a very recent date may have contributed in no little degree to this neglect, because it referred every variety of disease to the one pathological condition, namely, inflammation, and accounted for the difference of the phenomena simply by the peculiarities arising from the particular textures or systems in which the inflammation happened to be seated. It hence became a matter of comparative indifference, in what order the particular lesions were arranged, partaking as they did of the same essential nature.

Another circumstance, perhaps, no less efficient in bringing about the same result, is to be found in the habit, daily becoming more general, of authors confining their attention to a specific subject, and so publishing monographs, instead of large works upon medicine as a whole. Even these last, from the form they have now assumed, namely, that of cyclopædias and libraries, consist rather of detached essays, collected together and arranged alphabetically, than of a comprehensive treatise, the labour of an individual, and exhibiting the unity, method, and completeness to which such a course necessarily leads. In making this remark I do not mean to undervalue either of the practices referred to, and which have contributed in no small

degree to raise our knowledge of medicine to the high position it at present occupies, but simply to convey my impression that it has led to the neglect of nosology.

But, perhaps, the most important circumstance of all arises from the admitted difficulty of the undertaking. The earlier systems were so extremely artificial in their arrangement, and so manifestly erroneous in many of their details, as to lead to their rejection, as unsuitable to the present advanced state of medical science. But the attempts hitherto made to adopt physiological principles as the basis of the scheme, can only be regarded as an approximation to a better state of things. The obscurity of the real nature of some diseases, and the circumstance of others affecting several systems or tissues at once, render it extremely difficult to assign to them their proper position in a comprehensive and orderly arrangement.

Yet I think it can scarcely be denied, that an arrangement of diseases founded upon the real relations subsisting between them, if such could be obtained, and grouping together those which partake of the same essential nature, would be not only highly interesting in a scientific point of view, but of extreme importance in actual practice.

Many diseases, dissimilar in appearance and symptoms, partake of a nature so intimately the same, as to lead necessarily to a similar mode of treatment. A perfect classification would of itself suggest this analogy, and, like the natural systems in botany, afford the physician who is acquainted with one member of a group a tolerably correct idea of all the rest, although he may never previously have had an opportunity of seeing or treating them.

It is not my intention to prosecute this subject farther at present, than in this general way to vindicate nosology from the idea, under which it is generally regarded, of being a mere useless speculation. What I design is, to make a few general remarks upon the exanthemata, which form a very natural group of themselves, and to discuss the propriety of admitting hooping-cough into the number.

I need not say that this interesting class, so remarkable for some of their symptoms, has at all times attracted a great deal of attention; yet, it is singularly remarkable, that great diversity of opinion prevails among physicians, as to what diseases really constitute the group. Scarcely any two writers agree upon this point. And the diversity appears the greater, when we examine the nature of the affections thus compared. Some are acute, and others chronic; some are really fevers, others properly cutaneous inflammations; some are highly infectious, others not at all so; some run a regular course, in others no such regularity can be traced. This will be obvious by a single glance at some of the more important lists.

SAUVAGES.	LINNÆUS.	VOGEL.	CULLEN.
Pestis.	Morta.	Variolosa.	Variola.
Variola.	Pestis.	Morbillosa.	Varicella.
Pemphigus.	Variola.	Miliaris.	Rubeola.
Rubeola.	Rubeola.	Petechialis.	Scarlatina.
Miliaris.	Petechia.	Scarlatina.	Pestis.
Purpura.	Syphilis.	Urticata.	Erysipelas.
Erysipelas.		Bullosa.	Miliaris.
Scarlatina.		Varicella.	Urticaria.
Essera.		Pemphingodes.	Pemphigus.
Aphtha.		Aphthosa.	Aphtha.
MACINTOSH.	CRAIGIE.	LENDRICK.	
Rubeola.	Rubeola.	Variola.	
Variola.	Scarlatina.	Varicella.	
Scarlatina.	Urticaria.	Rubeola.	
Varicella.	Roseola.	Scarlatina.	
Urticaria.	Erythema.		
Roseola.			
Miliaria.			

This diversity appears to me to have been caused by a too close attention having been paid to a single symptom,—the cutaneous eruption,—a symptom sufficiently remarkable in itself, but too uncertain, even in those members of the family that usually exhibit it, to be made the basis of nosological arrangement. Instead of using a single symptom for this purpose, I

think it would be better to substitute a general agreement in several; and, under this impression, I would venture to propose the following enumeration as a more natural group, although the propriety of retaining the present name may well be questioned, inasmuch as it embraces several affections in which no cutaneous eruption can be detected.

Small-pox.	Varicella.	Plague.
Measles.	Vaccinia.	Mumps.
Scarlatina.	Maculated Fever.	Hooping-Cough.

The symptoms upon which I would place most reliance are the following:

1. Running a regular course. This is admitted universally in reference to the more commonly received exanthemata, as measles, scarlatina, and small-pox. In vaccinia, also, the same regularity is observed; and even as applied to the other diseases contained in the list above furnished, I think a candid mind must allow that a regular course can be detected, if we except hooping-cough, of which we shall speak hereafter, and admit that deviations from the ordinary phenomena occur within certain limits, to as great an extent as are known to take place in measles and small-pox.

This feature essentially separates the class from inflammation on the one hand, and from fevers on the other. It is true that the advocates of critical days may maintain that the latter also run a regular course, but certainly not in the same sense as that here understood, which is a succession of daily changes in the patient's condition, corresponding to the duration of the disease, and tending to its complete resolution within a given time. Of this we have an admirable example in the progress of the cow-pock vesicle. By crisis, on the other hand, is to be understood a peculiar effort of the constitution, occurring in the patient on particular days, and which if it do not succeed in restoring him to convalescence, leaves him still in the same feverish condition in which he was previously, till the arrival of another critical day renews the attempt.

2. The almost universal susceptibility to their influence. It is true that occasional instances are met with, of persons, though frequently exposed and using no precaution against infection, resisting their attack. The consequence is, that almost every one, sooner or later, is attacked by such of them as are common; and, in the case of measles and scarlatina, the period of life at which they are usually taken is that of infancy or childhood. Were the other members of the group equally common, it is probable that every one would take them as well, and that they would take them also about the same period of life, namely, childhood or infancy.

3. They occur only once in life, a single attack, for the most part producing in the individual a power of resisting subsequent exposure to infection. To this there are occasional exceptions, but as a general rule the observation holds good. Whether the same thing takes place in common fever is a disputed point, but I believe the weight of evidence is decidedly against the admission of the point, and in periodic fevers it is well known that a previous attack, so far from protecting the constitution, actually increases the liability to a subsequent one. I believe the instances of spotted or maculated fever being taken a second time are nearly as rare as in the other exanthemata; and the plague is a striking example of the correctness of the general rule.

4. They are propagated by a specific poison. Unlike other diseases, they seem incapable of being produced in any individual, except by exposure, either directly or indirectly, to another person already labouring under the same affection. Various circumstances may concur either to augment or diminish the force of this infectious property, but they all possess it; and if by suitable regulations it should ever happen that any one of them could be extinguished for a time, we have reason to believe that it would never be revived. Of course this assertion will not account for the first development of any of the class. Each must have had an origin somewhere, and the same combination

of circumstances which at first called it into being might again occur. It is only intended that from our present knowledge of their history we have reason to conclude that, by care or attention, the whole class might in time be expunged from the catalogue of diseases.

5. They are all, probably, capable of being propagated by inoculation. This observation is certainly true of the most marked exanthemata. In some of the affections contained in the present list, the experiment has never been tried, and in others it has certainly failed. Whether the experiment was fairly tried in these cases, it is hard to say; so many little points require attention, especially when the inoculation is practised, not with lymph, as in vaccinia, but with blood, as in Home's experiments, that it would be rash to conclude from a few failures against the general principle.

6. To these may be added their being attended with fever; and I was going to say their tendency to develope tubercle in persons predisposed to it; but the latter characteristic, though sufficiently obvious in some individuals of the group, is not by any means established with regard to all.

Now if we take these general symptoms as the basis of the present classification, it must be obvious to every one that hooping-cough fulfils all the conditions too exactly to be denied admission into the number. The only objection that appears to have any force is, that it does not run a regular course, or rather that its duration is so various and uncertain as to throw considerable doubts upon the propriety of placing it with others who exhibit such a marked contrast to it.

But I speak here only of the simple form of hooping-cough; complications in any disease will necessarily interfere with its progress, and the occasional protraction of the simple form of hooping-cough will be easily understood when the theory about to be proposed has been fully explained. That the disease does exhibit regularity in its course, and that it is really *progressive*, as much so as vaccinia or measles, is proved by the fact

that a precursory stage of four or five days can always be observed before the development of the whoop, during which the patient is said to be "breeding the complaint."

The admission by Cullen, and most of the early writers, of plague into this class, will facilitate materially the object I have in view. It is, in fact, the connecting link between hooping-cough and the commonly received exanthemata; for in the plague we have an affection of the glandular system, as the peculiar element of the disease, sometimes coinciding with a cutaneous eruption and sometimes without it; but the affection of the glands is its essential feature. In mumps the same thing is observable, for here we find the parotid glands gradually swelling out in the course of a peculiar fever, and after a certain duration gradually subsiding. I need not say that all the characteristics of the exanthemata enumerated above are presented by mumps, except the cutaneous eruption. Now, with these facts before us, I think it is not theorizing too far to assume that the phenomena of hooping-cough depend upon a gradual turgescence of the bronchial glands, coinciding with and arising from a peculiar fever, the result of the action of a specific poison on the system. That a swelling of these glands is the cause of hooping-cough has been maintained already by Dr. Ley and others; but that this swelling is symptomatic of a fever analogous to the exanthemata is, I believe, now for the first time set before the public. It is easy to see that the adoption of this hypothesis will at once account for all the phenomena. Tumefaction of these glands, by producing pressure on the pneumogastric nerve, causes a reflex action through the medulla oblongata, by means of the inferior laryngeal nerve, on the muscles of the larynx, producing the complete or partial closure of the glottis, upon which the hooping depends. That an irritation of the pneumogastric nerve, in this manner, will produce this effect, I have had repeated opportunities of observing in the North Dublin Union Workhouse, where children and infants, labouring under scrofulous enlargement of the chain of

glands in the neck, passing into the thorax, and under bronchial phthisis, presented the laryngeal or croupy breathing, and where this lesion was verified by dissection afterwards. An objection may be raised to this explanation of the whoop, from the fact that such a tumefaction, if it exist, must be permanent, whereas the hoop is only occasional. This is met by supposing that the gland is capable of a certain degree of momentary augmentation or diminution in volume on occurrence of anything tending to derange the circulation. Moral impressions, which are known to bring on a fit of hooping-cough, produce vascular turgescence of the cheeks, and probably also of other parts; and that the lymphatic glands are capable of very sudden alterations of volume is proved by a remarkable case that occurred in a woman in Mercer's Hospital, about a month ago, in whom all the symptoms of aortic aneurism, continuing, however, only for a short time, were caused by an enormous enlargement of a group of lymphatic glands about the arch, but which symptoms disappeared before death, in consequence of these glands becoming reduced in size.

That this enlargement actually takes place is a position sufficiently difficult of proof; the very hypothesis proposed accounts for the difficulty. If the nature of the affection is a gradual enlargement, lasting only for a short time, and then gradually subsiding, it is plain that, even in fatal cases, we have no right to expect *post mortem* evidence of its existence, because death seldom occurs till such an interval has elapsed from the commencement, that, if the swelling subside at all, it must be expected to do so before the period of examination. It is obvious that, during life, we have no means of deciding the question either way. But I am able to state that, in numerous *post mortem* inspections of children in the Workhouse, after hooping-cough, I have been able to detect these glands in a state of scrofulous enlargement, although I am far from laying much stress upon this point, because most of our fatal cases died of consumption, into which the hooping-cough degenera-

ted, and the appearance in question may have been only a casual occurrence; yet I can easily conceive that a set of glands enlarged during the prevalence of fever would be more likely to become the seat of a tubercular deposit, the result of that febrile action, than they would be in their quiescent state.

The admission of this hypothesis will sufficiently explain the fact that the duration, even of simple hooping-cough, is often much greater than it ought to be, on the supposition of its running a regular course; because the reduction of these glands to their natural size must be a work of time, and a great many circumstances may cooperate to retard its occurrence; among which may be enumerated constitutional peculiarities and the influence of different kinds of treatment.

We have now to consider the practical benefit likely to follow from the adoption of this view. A theoretical notion, that leads to no rational improvement in treatment, is literally worth nothing. At the same time, it must be admitted that, even in those cases where sound theory seems to lead to no immediate change in the principles of practice, great advantage must result ultimately from laying aside incorrect opinions of the nature of disease. In the case of hooping-cough, however, we have not to wait for proofs of its importance. If it be an exanthema, it will immediately occur to every one that it ought to be treated upon principles analogous to those which are found to answer in other members of the same group. The patient should be confined to his room, if not to bed, and put upon low diet; gentle aperients and diaphoretics administered until the affection has had time to run its course; after which, if the disease do not subside of itself, as it probably would in most cases, the remedies of a tonic and antispasmodic nature which are found so beneficial in chronic cases ought to be employed. Of course I speak here only of the simple form of hooping-cough. Instead of this, how common is the practice to allow the patient freely out into the open air, especially if the symptoms begin moderately and

the weather is mild, thereby interfering with the proper course of the affection, and running the risk of complicating the case by some of the more dangerous forms of pulmonary inflammation. This habit is unfortunately encouraged by the popular opinion, that nothing is so beneficial in hooping-cough as change of air; which leads some persons from the first, and many others at an early period of the complaint, to resort to this expedient; whereas it is well known to competent practitioners, that, however beneficial change of air may be in protracted cases, the premature adoption of the practice is calculated to retard rather than promote recovery.

In the same way false notions have led to similar errors, in reference to diet and regimen during the early stage, that would have been avoided had the opinion here advocated been adopted. Because the child has a good appetite and is not sick, he is allowed by many persons his usual food, and those evacuations which would have the effect of lowering the fever, and making the disease both milder and shorter, are generally neglected. Antispasmodics, too, are frequently administered before the cessation of the fever, and, consequently, do more harm than good. Finally, we can understand how it was that so much benefit used formerly to be obtained by stimulating embrocations to the back, the efficacy of which I can readily attest from several instances in which I have used them, but which, I believe, have fallen into general disuse from the abandonment or overthrow of the theories upon which their adoption was recommended. Their utility depended, when judiciously applied, not upon any effect they produced upon the spinal or other nerves, for these were not diseased, but upon the tendency they had to diminish the congestion of the bronchial glands, in the same manner in which similar frictions are used in mumps to reduce the tension and uneasiness of the parotids.

ART. V.—*Observations on Scurvy as it has lately appeared throughout Ireland, and in several Parts of Great Britain.*

By J. O. CURRAN, M.B., M.R.I.A., Corresponding Member of the Anatomical Society of Paris, and the Society of Practical Medicine of the Province of Antwerp; Professor of Practice of Medicine to the Apothecaries' Hall; Physician to the Dublin General Dispensary.

IRELAND, which for centuries has been, as it were, the laboratory of political economists, where experiments in government have been continually under trial, has of late years become equally interesting to the physiologist and physician, from the medical phenomena which it has presented to their observation. In the course of a few months six millions of people abandoned, completely and at once, the use of intoxicating liquors, to which many of them had been accustomed from their very infancy, whilst, a few years later, the entire population were compelled, by a dreadful visitation of Providence, to make, still more suddenly, one of the most thorough and decisive changes that could possibly be imagined in their articles of diet. The first only illustrated, by a new and truly grand experiment which it was impossible to cavil at, what had already been long and abundantly proved, viz., that intoxicating liquors are not merely totally unnecessary for the support of man in the most perfect state of health and vigour, but that, in almost all cases, the habitual use of such excitants may be very suddenly abandoned without producing any of those alarming consequences which were once deemed almost inevitable. The physiological results of the failure of the potato crop have yet to be learned; but as several able men have turned their attention to the subject, we may hope at some future period to arrive, among many other valuable results, at an approximation at least to the solution of the problem first enunciated by Magendie, and the satisfactory determination of which is of such

great practical importance, viz., the value of *mere bulk* alone in articles of food.

It is to the elucidation of an allied but different question that I mean at present to apply myself. Scurvy, which formerly was the very rarest of diseases in Ireland, has within the last two years been making its appearance in various towns and rural districts, and has latterly become exceedingly prevalent in all parts of the kingdom. A considerable number of cases of this disease having some time since occurred in my practice, I was led to ask my friends who had charge of hospitals whether they had met with the same affection; and I afterwards extended my inquiries to most parts of Ireland, and to several of the principal towns of Great Britain. With the most generous kindness all the officers of the metropolitan institutions to whom I applied for information at once threw open to me their wards, and afforded me every facility for prosecuting my researches. My friends in the provinces were equally kind in sending me cases and reports on the condition of their districts. In this way I have been enabled to collect, from competent observers exclusively, reports of more than six hundred cases, and a large mass of correlative information, the substance of which, bearing as it does on many difficult and disputed points in pathology and therapeutics, I shall endeavour to lay before the profession in as condensed a form as possible. It is my intention, in discussing this subject, to give first a general description of scurvy, such as I have myself met with it; afterwards to examine the individual symptoms as to their frequency, combination, &c.; and, passing then to the pathology, treatment, cause, diagnosis, and affinities, to examine *en passant* those disputed points in the history of scurvy, on which recent investigation, and the present epidemic, have thrown some additional light.

The following list exhibits the cases examined, and, with but a very few exceptions, noted by myself.

The reports of 470 additional cases, received from different parts of Ireland, England, and Scotland, with one exception,

to be mentioned presently, were but confirmatory of my own experience.

		Males.	Females.
Steevens' Hospital,	{ Sir Henry Marsh,	} . . 5	
	Dr. Croker,		
	{ Mr. Wilmot,	} . . 10	
	Mr. Cusack,		
	{ Mr. Colles,		
Meath Hospital,	{ Dr. Stokes,	6	
	{ Mr. Porter,	3	
Sir P. Dun's Hospital, . . .	{ Dr. Hunt,	4	
	{ Dr. Law,	5	
Hardwick, Whitworth, and Lunatic Hospitals, . . .	{ Dr. Corrigan,	6	3
	{ Dr. M'Dowell,	2	
Richmond Hospital,	Mr. Adams,	1	
St. Vincent's Hospital, . . .	{ Dr. O'Ferrall,	3	3
	{ Dr. Bellingham,	0	
Jervis-street Hospital, . . .	Dr. Neligan,	1	
South Dublin Union Hospital,	{ Dr. Mayne,	7	
	{ Dr. Shannon,	4	
North Dublin Union Hospital,	{ Dr. Monaghan,	0	3
	{ Dr. Kirkpatrick, }	73	
	{ Dr. M'Clelland, }		
Swift's Hospital,	Mr. Cusack,	1	2
City of Dublin Hospital. . .	Dr. Williams,	3	
Mercer's Hospital, . . . . .	. . . . .	3	
Cases from my own prac- tice(a),	{	10	
Total, . . .		147	11

PREMONITORY SYMPTOMS.

The disease, in most cases, commenced by a slow and gradual loss of strength, colour, and condition, the mind becoming simultaneously more and more sluggish and desponding. The

(a) Large as is the list of cases given in this table, it affords but a very imperfect representation of the number of patients affected with scurvy in Dublin at the time at which I write. A considerable number of hospitals I was unable to visit, and the dispensaries, where such patients are much more numerous than in hospitals, I have not alluded to; besides, scurvy has been decreasing in the city for nearly two months.

I unfortunately did not take notes of my own cases of scurvy until very recently: had I done so the number would be very considerable.

duration of this stage varied from a week to several months, but in some instances soreness and bleeding of the gums was what first attracted attention. In a considerable number of cases, however, the invasion of the disease was more sudden and better marked: febrile symptoms, very slight, and lasting only two or three days; or violent rigors, with all the stages well defined, and occurring many times daily for a week or more; or epistaxis, arising without cause, and often recurring; or pains, instantaneously, or gradually making their appearance in the lower extremities, the shoulders, the back, the upper extremities (very rarely), the head or neck; or spots on the legs, of all shapes and sizes, and of all the colours of ecchymoses in their different stages; or petechiæ over the lower extremities and trunk; or induration of the ankles or hams; or swelling of the legs,—were the first symptoms that induced the patient to consider himself unwell.

The phenomena present at the period when I first saw the patients may be conveniently arranged in the following groups. The classification I have adopted is, as all classifications must be, more or less arbitrary; but I think it will be found to bring together in the same category analogous facts, pretty much in the same way as they would be arranged in the mind of a physician who was about to treat the cases.

GENERAL DESCRIPTION.

1ST CLASS.—Pallor, generally extreme, never completely absent; countenance expressive of anxiety and exhaustion; skin cool, dry, and scurfy; tongue moist and clean; alveolar margins as if beginning to be affected by mercury; or red, spongy, and easily made to bleed; or presenting a blue line scarcely distinguishable from that caused by lead poisoning; or sometimes pale and exsanguine, but never natural. The muscular parts of the legs and thighs, and still more frequently the insteps and ankles, more or less indurated, sometimes as hard as a bone, and the skin invariably immoveable, apparently from the matting together of all the tissues into one solid mass; or else deep-

seated nodular indurations, as large as nutmegs, can be felt in the calves of the legs and backs of the thighs. The parts thus affected are of the natural colour, or yellowish, greenish, or of a dusky red, exquisitely tender, and the seat of intense pains, which are more or less aggravated by standing or walking, or even putting the foot to the ground; perseverance in standing or walking often causing fainting fits; pains constant, or more frequently becoming worse at night; epistaxis frequent; bowels natural or constipated; pulse natural or frequent, and always feeble.

2ND CLASS.—This class differs from the previous one only in having discolourations. On examination, large yellow, red, or “black and blue” spots, of various sizes, and sometimes as large as a man’s hand, are found covering the ankle-joint, the front of the leg, the gastrocnemii muscles, the popliteal space, the posterior part of the thigh, or the patella; these sites are enumerated in the order of their frequency. The colour of the spots sometimes causes them to be mistaken for erysipelas, and occasionally the whole limb, up to the middle of the thigh, is perfectly black all round. The temperature of the discolourations is generally raised, rarely lowered, and induration always exists at some stage.

3RD CLASS.—Anxiety and prostration strongly depicted in the countenance; pallor; the integuments flabby or œdematous; the skin dry and scurfy, and the temperature of the surface lower than in health; the gums spongy and bleeding, or rising in wart-shaped blue or blackish vascular and very fœtid granulations, perhaps above the level of the edges of the teeth, and in the mouth, forming large, fleshy masses, which bleed continually, and are easily broken off by the finger, or in an attempt at deglutition, but are very rapidly reproduced; the inside of the cheeks (very rarely) ecchymosed or varicose; tongue various, but generally moist and clean, sometimes ulcerated and deprived of its cuticle. Spots like petechiæ, but, in general, more irregular in size, and without the same vividness of colour and well-marked outline, occur frequently on the lower extremities,

more rarely on the body, and very rarely, indeed, on the upper extremities or head. Ecchymoses and variously-coloured patches, of different sizes, are observed on the front of the leg, the ankle, the popliteal space, the inside of the thigh, the buttocks, the front of the knee, the abdomen, the chest, the arms, around the eyes, or on the eye-ball itself: the four last, however, are extremely rare. Induration, such as before described, mostly attends the discolouration, but is not proportioned to it; ankle or knee-joints occasionally enlarged and giving a feeling of fluctuation; in some cases permanent contraction of the hamstring tendons with immobility of the joint. Pulse slow and feeble, or small and very rapid; bowels various, but in advanced stages we find dysentery, with bloody stools, present; urine high-coloured, never bloody; epistaxis very frequent; catching pain in left side not unfrequent; appetite rarely much impaired in the beginning; panting and breathlessness or fainting produced by the erect position, or by attempts to take exercise, generally on going out into the air, and often followed by more or less extensive sudden œdema.

4TH CLASS.—Pains, chiefly of the lower extremities, but often affecting, simultaneously or in succession, all parts of the body. They occasionally present exacerbations, generally nocturnal, and invariably have their chief seat in the bellies of the flexor muscles, always also in the soles of the feet, rarely around the joints alone. Skin pale and dry, with only a few faint yellowish spots; the calf of one leg might be flabby and the other unusually firm, but there was no actual induration; tongue natural; gums spongy, dark-coloured, and easily made to bleed; breath never foetid; pulse feeble, slow, rarely accelerated; anxiety and despondency always strongly marked; epistaxis frequent; urine high-coloured occasionally, but never from blood; bowels regular or confined.

SYMPTOMS.

Gums.—A diseased condition of the alveolar margin of the gums seems to be the most constant of the characteristics of

scurvy. In my experience it always came on very gradually. There were but four cases in which the gums were perfectly sound, but in fifteen or twenty it was very difficult to say positively whether the diseased condition met with was a symptom of general disease or not. The state of the gums bore no constant relation whatever to any scorbutic symptom or group of symptoms. In some of the fatal cases the gums were only spongy and vascular at the edges, and bled but little, whilst in patients (one of Dr. Bellingham's, and another of Dr. Nunn's, for instance) who were able to sit up in bed, and even to walk, and who speedily recovered on being placed under appropriate treatment, the vegetations on the gums covered the teeth on both sides, preventing the approximation of the lips and embarrassing the motions of the tongue. Sometimes pieces of the gum, but more frequently dense clots of blood which were mistaken for bits of flesh, came away during the efforts of deglutition, which, in such cases, could scarcely be attempted without producing much pain and hæmorrhage. In several instances patients stated that the vegetations had been repeatedly scraped off by their previous medical attendant, but the operation was attended with much hæmorrhage, and the vegetations were completely restored in a few days, so long as the disease was progressing. Pale or exsanguine gums were several times met with, but under no fixed conditions. Very profuse salivation occurred in two patients of Dr. McClelland's: the gums were spongy and bled freely, but there were few vegetations and no fœtor whatsoever. As a general rule, the fœtor only occurred where there were vegetations, or in about one-eighth of the whole number of cases. In two instances the smell of the patients' breath was of the most offensive and disgusting description, although the mouth was not affected as much as in many other cases where the fœtor was but slight. The teeth were generally loosened, and often fell out on attempting to eat; as recovery progressed the gums closed around those teeth that remained, and they became as firm as before. Some-

times the gums remained sore after the other symptoms had disappeared, but the reverse was oftener the case.

Ecchymoses, Eruptions, &c.—Both true petechiæ and spots differing from petechiæ in the irregularity of their colour and size occasionally formed an eruption which occupied the lower extremities and trunk, in but one instance appearing on the arms and never on the head. It was generally the only affection of the skin, or it (more rarely) preceded or accompanied the other forms of discolouration of the surface. By far the most frequent appearance was a blueish red and dusky hue around the ankle joint, next in frequency similar discolourations over the tibia, &c., as before stated. These spots were nearly always at some stage, and generally throughout, attended with induration and matting together of the subjacent tissues. The ecchymoses in most instances appeared suddenly; but in one case to which my attention was directed by Mr. Moriarty, Dr. Corrigan's clinical clerk at the Whitworth Hospital, they arose in a single night. In many other cases that came under my observation they formed within three days. They did not follow any regular course in making their appearance: they were sometimes noticed first as ordinary ecchymoses, which afterwards went through all the changes of colour which are presented by effused blood undergoing a gradual absorption; in other instances a faint yellow tint, which at first I could not get others to notice, deepened as it was watched from day to day into a bright yellow, greenish, greenish-red, up to the well-marked black and blue of a bruised surface. Pains sometimes preceded them for two or three weeks, and subsided on their appearance; but more frequently the ecchymoses suddenly discovered were regarded as the result of forgotten bruises, and, as in a patient of Dr. Corrigan's, and another at present under the care of Mr. Adams, were, by the persons who first were applied to, actually treated as such. The temperature of the discoloured parts was almost always higher than than that of the rest of the body. The ecchymoses were invariably, at some stage, sensitive, often acutely so,

and sometimes they were the seat of intense pains, increased by motion of any kind, but rendered excruciating by the patient attempting to walk. During their development and decline their sensibility was occasionally not abnormal. In one instance only I observed a small greenish, sensitive, and indurated spot above the bend of the elbow; two similar cases were reported to me. Ecchymoses on the body were noticed about half-a-dozen times, and reported as often. They were met with only on fat and flabby subjects.

Besides ecchymosis there was another form of cutaneous discolouration frequently noticed both by Mr. Cusack and myself, and of which a well-marked instance occurred in the person of an old lady in Swift's Hospital, aged about 80. The discolouration in question seemed to arise, not from extravasation, but from remora of black blood in the cutaneous veins. The vessels ramifying irregularly over the surface, when pressed by the finger, evidently collapsed, but they still contained blood; they were apparently but half filled with a black and viscid fluid. Spots, formed by vessels in this condition, I noticed in two or three cases only, and in no instance were they accompanied by the induration which I have described as attending ecchymosis. In the case above referred to, the spot, as large as the palm of the hand, covered the glutæus maximus. On the leg there were ecchymoses and indurations; the gums were spongy and bleeding, and there had been epistaxis.

Similar to this was an appearance pointed out to me by Mr. Moriarty; it was the great deepening of colour of petechiæ-like spots, the moment the patient assumed the erect posture, and their fading again on the recumbent posture being resumed.

In a patient of Dr. Kirkpatrick's, who presented the most miserable spectacle that could be imagined of scurvy, in its very worst form, both legs were greatly swelled, tense, and painful up to the knees, the surface being of a faint rose-red, but marbled all over with blackish lines. There were ecchy-

moses in other parts; intense pains; the gums gangrenous, and several teeth had dropped out.

In another case, under the care of the same gentleman, the eruption on the lower extremities resembled very thick-set rupia. It really consisted, however, of minute ecchymoses, perfectly black, uniformly circular, and each spot about a quarter of an inch in diameter. I saw but the one case of this kind.

Ecchymoses around the eyes occurred in two patients under Dr. M'Clelland's care; one, however, had very violent cough, and emphysema of the lungs, which, doubtless, contributed to produce the appearance. In two cases reported to me by Dr. Hobson, of Liverpool, ecchymoses occurred on the face. There was nothing otherwise remarkable in these cases.

In two instances noted by Mr. Price, of Waterford, and in others under the care of Mr. Wilde, ecchymoses covered the globe of the eye, and appeared upon the palpebræ, producing in the former situation slight chemosis: the lids were not swelled, but the contour of the orbit was of a black and blue colour. These symptoms were always conjoined with soreness of the gums, but in none were the pains of a very distressing character. They rapidly recovered under the use of antiscorbutics, without local treatment. Many cases, doubtless of this kind, have been related to me as occurring in the practice of friends in the city; not being recognised, they were subjected to a variety of local and general treatment, which was continued for months without any benefit.

Hæmorrhages from Mucous Membranes.—Epistaxis occurred in at least half the cases; it was met with in all stages; was sometimes so copious as to necessitate plugging the nares; was generally repeated several times, and seemed to have no constant relation to any symptom. It sometimes burst out violently at once, being the first symptom that attracted the attention either of the patient or his friends. A remarkable case of the kind occurred to Mr. Porter nearly two years ago, and in my experience it has not been rare. It was observed equally

in patients who had rigors, and in those who had not; in the well-fed, and in the starved; in the robust, and in the emaciated.

Hæmorrhages from the kidneys and bowels were very rare, and were observed only in cachectic and broken-down subjects, and in an advanced stage. The bloody stools were sometimes, as in fatal cases of Dr. McClelland's and Mr. Wilmot's, extremely profuse, and complicated with dysentery. Where blood passed from the bowels, the patients were soon completely blanched, and the fatal termination was not long delayed. Hæmorrhage from the stomach or lungs did not occur in any case.

Effusion into Joints.—Effusion into the ankle-joint was very frequent, but was never extensive, and did not require any special treatment. The knee-joint was more rarely affected, but the effusion, in more than a dozen cases, was very considerable, and sometimes remained long after the disappearance of the other symptoms. Drs. Law, Hunt, Stokes, Cusack, &c., have all remarked the frequency of this affection in scurvy, and most of them have had cases in which the joint was left for a long time stiff, or even remained permanently impaired. A patient of Dr. Kirkpatrick's, and one other, were the only cases in which I detected fluid in the hip-joint. The patients are still under treatment.

Induration.—In the general description of the varieties of scurvy, I have already spoken of the indurations met with. The nodular form was comparatively rare, but was very well marked in patients under the care of Mr. Cusack and Doctors Hunt and Law(a). It was invariably accompanied by pain and tenderness in the muscles affected, and more or less soreness of the gums; but very generally ecchymoses or discolorations of any kind were entirely absent. To detect the nodulations, it was always necessary to grasp the belly of the muscle in the

(a) Fel Plater (*Prax. Med.*, lib. iii. cap. 4, *de Defædatione*) is the first and almost only author who has described these very peculiar indurations.

hand, and to feel for them. In a case of Dr. Hunt's they continued more than two months resisting every kind of treatment.

The diffused form of induration occurred, to a greater or less extent, in almost every case. It sometimes preceded the ecchymoses, and very often remained long after the parts had resumed their natural colour. In only one case did it affect the neck, and in that instance it was unaccompanied by discoloration. There was difficulty in moving the jaw, but nothing like the scorbutic trismus described by Nitzsch, Goguclin, &c.

Glandular enlargements were noticed only in the poor-house, and not more frequently than in ordinary cases.

Skin.—Dryness and a scurfy state of the skin was more or less present in all cases. In the commencement there might be perspirations, but a dryness of the tegumentary covering of the body was among the most constant symptoms of the disease when fully developed.

Temperature.—For observations on the thermometric temperature of scurvy patients I am indebted to Mr. Nuttall, one of the clinical clerks of Steevens' Hospital. He finds the temperature of the mouth sometimes as low as 92° Fahr. but always one or two degrees below the ordinary standard. The spots examined by the hand appeared generally warmer than the rest of the body.

Pains,—more or less severe, so as even to keep the patient groaning incessantly,—were noted with scarcely an exception in all cases. In all, too, they were rendered more severe by assuming the erect posture, and in many walking rendered them so excruciating as to cause the patient to faint repeatedly. The following is the order of frequency of the parts affected. The soles of the feet, the calves of the legs, the heel and ankle-joint, &c. In two instances in the North Dublin Union Hospital, the entire of the surface of the head was the almost exclusive seat of pain of a very intense description, but which, the patients said, was not headach but something more superfi-

cial. In one case the neck was the part principally affected. Frequently the shoulders were principally complained of, but the pains did not long occupy this site, and pains in the legs, *always muscular*, were in *all* instances simultaneously present. Pain in the back, severe and obstinate, was only occasionally observed (as in several patients at Steevens' Hospital); it was by no means either of very frequent occurrence or a very remarkable symptom(*a*). A patient of my own, another whom I saw under the care of Dr. Corrigan, and a third under Dr. O'Ferrall, had been treated by their previous medical attendants by local and general means, in the belief that it was rheumatism only they were suffering from.

Contractions of the ham-string tendons, with loss of motion of the knee-joint, occurred in more than a dozen cases. They seemed in most instances to be caused by effusion into the joint taking place whilst the limb was maintained for a long time in a permanently fixed position, through dread of the pain caused by the slightest motion. This, at least, was the case in a patient under Dr. Kirkpatrick's care: after complete recovery from an attack of scurvy the same disease again broke out, and both legs are now permanently contracted and useless. In other cases the deformity was brought about differently: the muscles seemed to take on a gradual process of involuntary contraction, which sometimes afterwards subsided, but more frequently was permanent and irremediable.

Digestion, in the commencement, was invariably good, and the appetite far from impaired. The tongue was rarely affected; two or three times portions of it and of the inside of the cheeks were blackish from a sort of varicose condition, similar to that above described as occurring on the skin; in several instances the cuticle of the tongue peeled off and was afterwards replaced. The bowels at first were either natural or constipated,

(*a*) In Exeter it would appear that pain, or weakness of the back, is a much more constant symptom of the disease than it is with us.—Prov. Med. and Surg. Jour., June 2; and Lond. Med. Gaz. Nos. 109, 110. 1847.

in advanced cases of a severe description there was often diarrhœa or dysentery, sometimes, as before stated, with bloody stools.

Circulation.—The pulse was very generally quite natural, but sometimes quick, and always very feeble. *Bruit de soufflet* in the neck, though carefully looked for, was only met with in two instances, and those cases in which of all others I least expected to find it, as they had very little of the anæmic look so common in this disease. M. Beau's cases, in which the murmur existed, may therefore, so far as experience in this country is concerned, be regarded as altogether exceptional. No physical sign is subject to such danger of fallacy as *bruit de soufflet* in the neck. The stethoscope should be pressed with the observer's own fingers sufficiently firmly against his ear, and the patient's skin should not even be indented by the instrument, or the observation is quite valueless. Cases have been repeatedly pointed out to me by students as presenting cervical *bruits*, which, on examination, were found to have no morbid sound whatever, but what was produced by pressure. M. Beau, however, is far too good an observer, and has studied the subject far too elaborately, to be misled by any error of this kind(*a*).

Derangement of the circulation was much more frequent at the very outset than at any after period. The premonitory fever, in some cases, was very violent. A patient of Dr. McClelland's had, during four days, repeated rigors, with the most violent shivering and sweating. The fever then subsided, and in a few days the spots appeared on the legs, the case, in all other respects, pursuing the very same course as those from first to last perfectly apyrexial. Violent febrile (premonitory) symptoms were, however, excessively rare; but a slight degree of shivering, with acceleration of pulse, flying pains, and prostration, was not uncommon.

(*a*) See his very able series of articles on morbid bruits in the numbers of the *Archives Générales* of last year.

Nervous System.—More or less of prostration and lassitude were invariably observed, and a sullen despondency was very frequently met with ; but deafness, ringing in the ears, weakness of vision or of hearing, sleeplessness, or delirium, were not noted in a single instance, even in those cases where the typhoid prostration was most remarkable.

Coexistence with cutaneous diseases, though often alluded to in reports received from the country, and in the descriptions of sea and land scurvy contained in authors, was observed only in a single instance, in a patient in the Poor-house.

PATHOLOGICAL ANATOMY.

I know of but three *post mortem* examinations of scurvy patients made in this country, two at the Meath, and one at Steevens' Hospital. Mr. Wilmot, Jun., the resident surgeon of Steevens' hospital, and Mr. Haslep, clinical clerk at the Meath Hospital, have very kindly furnished me with a minute account of all the details of these cases. They are wholly negative in their character as to internal organs ; there were no effusions anywhere. The spots on the legs were carefully dissected, and their colour and induration were found to be due to extravasated blood, which both deeply infiltrated the tissues, and, in some cases, was found in a fluid form, bound down underneath the membranes. Since Thibaut and Poupart's investigations at the Hospital of St. Louis, Paris, in 1699(*a*), not an idea has been gained on the anatomy of scurvy. Effusions of blood or serum were met with in different tissues or hollow viscera ; the fluctuation in the joints was found to be owing to fluid blood contained within their capsules(*b*) ; the nodules were discovered to be masses of coagulated fibrine ; and the diffused induration was due either to blood or fibrine, infiltrated in a

(*a*) *Mémoires de l'Académie des Sciences*, 1699, p. 237.

(*b*) Two interesting cases of scurvy, with careful dissections, are recorded in Andral's *Clinique Med.*, vol. iii. p. 466, and vol. i. p. 584, 3me edit., Paris. See also *Rouppé De Morb. Navig.*, and *Dict. des Sci. Méd.*, Art. *Scorbut*.

solid or fluid form through the substance of the tissues(*a*). The fluidity and dark colour of the blood was also noted, and a corrosive quality and alkalinity was ascribed to it. Poupart likewise observed caries of bones, separation of the epiphyses, and erosion of the cartilages of incrustation. At this moment we know nothing more with certainty.

ETIOLOGY.

To know the causes that give rise to scurvy is, in a great measure, to know its treatment; and, as the most logical and convenient means of arriving at just conclusions, I shall now proceed to adopt that method of considering the subject (*par voie d'exclusion*) of which the French pathological writers are, with great reason, so very fond.

Sea Air.—No one in the least acquainted with the literature of the subject can tolerate for a moment the names, so commonly employed, of *land* and *sea* scurvy. It would be quite as pathological to talk of land and sea pleurisy, or metropolitan and rural fever. Scurvy was first met with on land, and in persons living exclusively on *fresh* fish, viz., in the army of Louis IX., in Egypt, A. D. 1260(*b*); and almost all the earliest, and by far the most virulent, epidemics of scurvy,—as that affecting the French in Newfoundland(*c*), the besieged in Breda(*d*), the

(*a*) Sir G. Blane found a want of fluidity in the blood, but could not discover any extravasation or ecchymoses in the indurations or discolourations of scurvy. His cases, I presume, were similar to those in which I observed the colour to deepen gradually, for this is quite contrary to the course taken by ecchymoses in general.—*Observations on the Diseases incident to Seamen*, by Gilbert Blane, M. D. London, 1785, p. 474.

(*b*) *Histoire de Louis IX. par le Sieur Joinville.* As of syphilis, so of scurvy, the notices in the ancients are too vague and imperfect to enable us to say whether they had met with the disease or not. If they did meet with it, it was in the army of Ælius Gallus in Arabia, or in that of Germanicus in Germany. *Strabon. Geograph.*, lib. xvi., and *Plinii Hist. Nat.*, lib. xxv.

(*c*) Jacques Cartier and L'Escabot; Hakluyt's *Voyages*, vol. iii.

(*d*) F. Vander Mye, *De Morb. et Sympt. Pop. Bredanis Tempore Obsidionis*, &c.

Russians at Wiburg(*a*) and Cronstadt(*b*), &c.,—were observed far inland, and in persons quite unconcerned with nautical affairs. The disease was formerly endemic in England, Holland, and most of the northern countries. Scurvy is neither more severe on board ship than on land, nor does it there present the slightest peculiarity in its course or symptoms, so far, at least, as can be learned from the descriptions of authors. There is, therefore, no such thing as *land* or *sea* scurvy.

Salt.—Salted food having formed the principal, or exclusive diet of the soldiers and sailors who were the earliest victims of scurvy, the disease was soon ascribed to an excess of salt in the system, and this popular error is still exceeding current in the public mind. That the notion is altogether without foundation is, however, very easily shewn. Anson's crew, six weeks after leaving Mexico, were attacked with scurvy, though living exclusively on fresh provisions: the same was the case, in 1720, with the German army in Hungary and Piedmont(*c*). The peasants about Dresden, who live on pulse alone, are very subject to it(*d*); and scurvy commits great ravages among the inhabitants of the Alps, when compelled by bad harvests to live exclusively on roots. Again, in 1736, it cut off, at Azoff, many thousand Russians, who were subsisting chiefly on fresh fish, caught in the River Don, and which they ate but half-cooked. The same thing happened at the siege of St. Anne; and many other instances are to be found in the older writers. But, to come to more recent times, we have scurvy raging among the British troops in India(*e*), the inmates of the Milbank Penitentiary(*f*), the prisoners of war in Portchester Castle and Norman Cross(*g*), and lastly, at the present moment,

(*a*) *Commerc. literar. Norimb.*, ann. 1734.

(*b*) *Parerga Med. conscript. a Damiano Sinopao*.

(*c*) *Krameri Dissertatio epistolica de Scorbuto*. (d) *Idem*.

(*e*) Sir J. M'Gregor in *Ed. Med. and Surg. Jour.*, vol. i.

(*f*) Latham's account of the Milbank Penitentiary Epidemic.

(*g*) Sir G. Blane in *Med. and Chirurg. Trans.*, vol. vi. p. 502; see also vol. iv. of same work; *Trans. of Coll. of Phys. of Lond.*, vols. ii. iv. &c.

in all parts of Ireland, as well as in very many in Great Britain: with the most different dietaries, both as to amount and quality, but all agreeing in this,—the almost total exclusion of salt food of any kind. Salt, then, is not *the* cause of scurvy; nay, upon a thorough investigation of the subject, shall we not hesitate to say, that it is even *a* cause of that disease, since Lind gave it in large doses to scorbutic patients without the least apparent injury.

Luxury.—Willis, the celebrated anatomist, ascribed the prevalence of scurvy in his time to the increased consumption of sugar(*a*); Maynwartinge(*b*), to the use of tobacco and excessive venery; Harvey(*c*), to gluttony and debauchery, &c. All these, however, and many other crude notions of a like kind, are quite unworthy of a serious refutation, since a sufficient answer to them all is afforded by the prevalence of scurvy in Ireland at the present time.

Want of Milk.—The value of milk is unquestionable, but its powers in combating disease are very limited; and although Dr. Prout, with some shadow of reason, makes it the *beau ideal* of human nourishment, it is to most stomachs of grown men by no means a very digestible substance. Dr. Christison, of Edinburgh, in a very interesting paper(*d*) on the subject, ascribes the recent prevalence of scurvy at Perth to the want of milk, and asserts his belief in milk being an antidote for the disease. Unhappily, however, the literature of scurvy affords many instances of the utter inefficacy of milk to protect from that disease, but our own experience on this head is quite sufficient. All the patients (with but four or five exceptions) in the North and South Union Hospitals of Dublin had been in the Poor-House for periods varying from six months to five years, and for at least six months had been using the following dietaries:—

(*a*) *Tractatus de Scorbuto.* (*b*) *Morbus Polyrhizos*, &c., quoted by Lind.

(*c*) *The Disease of London, or, A new Discovery of the Scurvy*, 1675.

(*d*) *Monthly Journal of Med. Science*, Numbers for June and July, 1847.

South Union,—seven ounces of oatmeal in porridge, with half a pint of milk, for breakfast; eight ounces of bread, with half a pint of milk, for dinner,—under this regimen four cases occurred. The other seven attacked in the house had been on the diet of the infirm, which is as follows: eight ounces of bread, with one pint of milk, for breakfast; and for dinner the same quantity of bread with half a pint of milk; three of these were receiving, in addition, on account of their feebleness, half a pound of mutton and half a pint of porter. In the North Union, the patients, when attacked, were using for breakfast one quart of porridge (containing seven ounces of oatmeal), with half a pint of milk; for dinner, three-quarters of a pound of bread, with half a pint of milk; the bread used at dinner being replaced on Tuesdays and Fridays by one quart of boiled rice: about a dozen were also receiving one pint of tea in addition.

If, however, it be Dr. Christison's intention to maintain that milk but supplies the proteinaceous nutriment wanting in the food, then his argument is answered by the fact, that scurvy appears amongst the Esquimaux, when flesh is most abundant(*a*); that it raged most severely in Anson's crew, when flesh-meat, fowl, and fish, all fresh, together with farinacea, were most profusely supplied to them; that it shewed itself in the British army in India(*b*) and at the Cape(*c*); the Russian army on various occasions(*d*); the French and German armies, &c.; as well as in a great number of merchant and other vessels,—of which notices will be found scattered through the pages of the *Lancet* and *Medical Gazette*, &c.,—when a liberal dietary of farinaceous articles and fresh meat, without any salt provisions, was that which was employed. One of the very worst cases that I saw this year occurred in the wife of a shopkeeper in Camden-street, who, by the advice of a medical man, had been using, for the three

(*a*) Sir Edward Parry.

(*b*) *Trans. of Med. and Phys. Society of Calcutta*, vol. viii.; and Sir J. M'Gregor in *Ed. Med. and Surg. Jour.*, vol. i.

(*c*) *Med. Gaz.*, vols. xxi. xxii. xxiii.

(*d*) Nitzsch.

months previous, beef-tea with bread and butter for breakfast; roast meat, broth, and bread for dinner; and coffee and bread and butter in the evening: together with Guinness's porter, and wine. She was universally œdematous, had extensive ecchymosis on the lower extremities, and could not close her lips from the exuberance of the vegetations on the gums, whilst fainting was produced by the most trifling exertion. On the other hand, thousands, nay millions, of peasants in the centre and west of Ireland have lived for years exclusively on potatoes, with salt, or some similar condiment, and enjoying the luxury of milk only at rare and distant intervals, or *not at all* (as we have satisfactorily ascertained in very many instances); yet scurvy was unknown in Ireland until within a very recent period. Dr. Stokes informs me that he, this year, attended four persons in the upper ranks of life who were affected with scurvy, although living on the mixed diet, with wine, &c., common to persons of their class. Drs. O'Ferrall, R. W. Smith, and Price, have had several similar cases. Three patients at Swift's Hospital were under Mr. Cusack's care for scurvy, very well marked, yet the dietary of that admirably managed institution is as follows: breakfast, a pint of tea, six ounces of bread, one ounce of butter; dinner, three-quarters of a pound of beef or mutton, three-quarters of a pound of bread, one pint of soup. (On Tuesdays and Fridays, one pound of bread, one pint of mixed milk, one ounce of butter, one quart of rice-pudding.) Supper, eight ounces of bread, one pint new milk: beer, porter, and wine, whenever deemed necessary or desirable. Without referring to many other cases in my own experience, Drs. Seller, Ransford, Patterson, and Taylor, of Edinburgh, men-

(a) In the discussion that took place at the Medico-Chirurgical Society of Edinburgh on this subject, all the members, strangely enough, were ignorant not merely that scurvy did actually exist extensively in Ireland at present, but that an account of its appearance there had been published more than a year ago. See Dublin Hosp. Gazette, Nos. xxiv. and xxix. of vol. ii. Dr. M'Cormack's paper in the Number for April 15th, 1846, will well repay an attentive perusal.

tion numerous instances of the disease attacking persons in the upper ranks of society. We may, therefore, very safely conclude, that *neither misery, nor the want of milk, flesh, fish, farinacea, nor any combination of these, can be regarded as the cause of scurvy making its appearance.*

Uncleanliness, &c.—This has been stated by several authors; but hygienic errors of this kind are certainly on the decrease, and every one who has either read or travelled much must be aware, that scurvy is unknown in many localities in which such causes attain their acme of intensity.

Epidemic Character.—In investigating the questions that remain to be considered, as they embrace topics not capable of strict demonstration, viz., the agency of an unknown combination of circumstances in producing disease, it will be necessary to operate on a very large collection of facts, in order to eliminate the element of chance, and, if possible, to arrive at something constant. For this purpose the following table has been compiled, in order to place a full view of the facts distinctly before the reader:

SEVERE EPIDEMICS OF SCURVY CONFINED TO SPRING.

Army of St. Louis IX. 1260(<i>a</i>).	Holland, 1562(<i>f</i>).
Crew of Vasco de Gama, 1497(<i>b</i>).	Breda, 1562(<i>h</i>).
Colonists of Stadacona, 1535(<i>c</i>).	E. I. C's., first fleet, 1600(<i>i</i>).
Settlers in Nova Francia(<i>d</i>).	The fleet at Torbay, 1695(<i>k</i>).
Cartier's Second Voyage(<i>e</i>).	The Saxons at Thorn, 1703(<i>l</i>).
Holland, 1556(<i>f</i>).	Russians at Belgrade, 1720(<i>m</i>).
Brabant, 1556(<i>g</i>).	Baltic Fleet, 1726(<i>n</i>).

(*a*) *Hist. de Louis IX.*, part ii. Par le Sieur Joinville.

(*b*) *Herman Lopez de Castaneda.* (c) *Encyclopedie Biographique.*

(*d*) Lind on Scurvy. (e) Hakluyts' Voyages, vol. iii.

(*f*) Ronssei *Comment et Epist.* (g) Dodonæi *Prax. Med.*

(*h*) Vander Mye, *De Morb. et Sympt. Pop. Bredanis*, &c. One of the most intensely interesting medical histories we have ever read.

(*i*) Purchas' Collection of Voyages, vol. i.

(*k*) Cockburn's Sea Diseases. (l) Bachstrom, *Obs. circa Scorbutum.*

(*m*) Kramer. *Dis. Epist. de Scorbuto.* (n) Mead on Scurvy.

Russians at Cronstadt 1730(a).	At Fort William, 1746(e).
„ „ „ 1731(a).	At Riga 1749, 1750, and 1751(e).
„ „ Wiburg, 1732(b).	Palatine emigrants on passage to Nova Scotia (half died), 1750(e).
„ „ Cronstadt, 1733(a).	British at Quebec, 1760(k).
St. Petersburg, 1734(b).	Orphan House, Moscow, 1767-68- 69-70-72-73(l).
Russians at Azoff, 1736(c).	The West India Fleet, 1780(m).
Imperialists in Hungary, 1737(d).	The Channel Fleet, 1780(e).
Russians at Ust-Samara, 1737(c).	„ 1795(h).
Gmelin's exploring party in Sibe- rian winter quarters, 1736(e).	Army of the Alps, 1795(n).
Russian troops at Chocim, 1739(c).	French at Alexandria, 1801(n).
Anson's crew (first attack), 1741(f).	British army in India, 1801(o).
Russian troops at Borgo, 1742(c).	The Milbank Penitentiary, 1823(p).
Russian troops at Abo, 1743(c).	At Nicolaef, Cherson, Sevastopole, &c., 1823(q).
Russians at Fort St. Anne, 1744(c).	Along the Dnieper, 1824(q).
The Channel Fleet, 1746(g).	British Army in India, 1834(r).
„ 1747(h).	Provincial Prison, Prague, 1844(s).
Exploring party Hudson's Bay, 1746(i).	In Ireland, 1846(t).
„ at sea, 1747(i).	In Exeter(u).
At Taverhoff, 1738-39(e).	
H. M. S. Greenwich at Ruattan, 1743(e).	

(a) Sinopeus, *Parerga Medica*.

(b) Nitzsch in *Commerc. Litterar. Norimb*, 1735.

(c) Nitzsch, *Theoretisch Practische Abhandlung des Scharbockes*, &c., and Lind's Treatise, where it is well analyzed.

(d) Kramer, *Dissert. et Epist. de Scorbuto*. (e) Lind on Scurvy.

(f) Anson's Voyage, by Walter. (g) Huxham.

(h) Trotter, *Med. Nautica*, vol. i.

(i) Ellis's Voyage to Hudson's Bay, &c.

(k) Smollet's Hist. of Eng., vol. iv.

(l) Mertans, in Phil. Trans., vol. lxxviii. part 1.

(m) Sir G. Blane, Dis. of Seamen.

(n) *Mem. de Chirurg.*, J. D. Larrey.

(o) Sir J. M'Gregor in Ed. Med. and Surg. Jour., vol. i.

(p) Lond. Med. Gaz., Feb. 1842; also Latham.

(q) Lec in Lond. Med. and Phys. Jour., vol. iv.

(r) Trans. of Med. and Phys. Soc. of Calcutta, vol. viii.

(s) *Vierteljahrschrift von der Medizinischen Facultat in Prag*, 1844.

(t) M'Cormack in Dub. Hosp. Gaz., vol. ii.

(u) Prov. Med. and Surg. Jour., June 2, 1847; and Med. Gaz., May 28, and June 4, 1847.

OTHER SEVERE EPIDEMICS OF SCURVY.

Anson's crew (second attack), summer.	West India Fleet, 1740, commenced in August(b).
Perth Prison(a). Do.	

From an examination of the above table, which contains all the remarkable accounts on record, it appears evident that scurvy must be either an epidemic affection like influenza, cholera, and the potato disease,—arising at particular periods, and running its course independent of any known conditions,—or it must be due to some peculiarity of diet or climate, found only, or chiefly, during the winter season.

The epidemic character of scurvy seems to have been more than suspected by the officers, whose reports on the scurvy which prevailed at the Cape in 1836 were published(c) by Sir J. M'Gregor, as the fact of the simultaneous appearance of the disease among the whalers in the Southern Ocean, and among the troops in the interior, is more than once alluded to by them. It is, however, quite contrary to the character of an epidemic, that the *officers*, both by sea and land (and equally in the Russian, Dutch, Swedish, Spanish, English, &c., services), should enjoy an almost total exemption from its ravages; and that the besieged in a town should lose vast numbers from it, whilst those with whom they were in daily and hourly combat should be altogether exempt. It appears to me, then, from a very careful consideration of this subject, that the conclusion towards which all the evidence directly leads is this, that, in certain seasons, an “epidemic constitution” (as Sydenham would call it) exists in the air, giving a *tendency* to the development of scurvy, but that other predisposing causes are necessary to its actual outbreak. Now, on examining our list a second time, we find that there are certain hygienic causes which, in almost every individual instance, are noted as having been present, and generally intensely active, viz., humidity,

(a) Christison Monthly Jour. of Med., June, 1847.

(b) Lind on Scurvy.

(c) Med. Gaz., vols. xxi. xxii. xxiii.

sudden alternations of temperature, inactivity, and moral depression, and, lastly, the absence of fresh succulent vegetables. However, as this paper has already extended to a greater length than was anticipated, I shall add but a word or two in illustration of each.

Humidity and sudden thermometric changes have been so characteristic of the past and previous spring and winter, that the subject was brought before both the Royal Irish Academy and the Royal Dublin Society. Professor Lloyd stated to the Academy, that on one occasion, in the course of twenty four hours, the thermometer rose more than 30° , a circumstance quite unprecedented in the meteorological annals of this country. During the last winter, in particular, the unusually intense cold, alternating almost daily with a precocious warmth, and generally attended with a very humid atmosphere, must have been the source of extreme suffering to the poor, even had not the very unusual circumstances of the country rendered them unable to adopt the ordinary precautions against such vicissitudes, by fires and clothing. From the time of Joinville's account of Louis's army encamped near Damietto, down to that of Dr. Ford's of the British army in the province of Adelaide, at the southern extremity of the same continent, we find, whatever may have been the prejudices or the theory of the observer, that moisture and atmospheric vicissitudes are laid down almost invariably among the predisposing or exciting causes. When,—as in the case of Anson's crew in the Pacific, the British fleet in the West Indies and in the Mediterranean, and the French troops in Egypt,—we see the disease appearing in regions ordinarily accounted warm, we shall still find that to scorching heat by day succeeded intense cold by night; whilst either rain, dew, or the spray of a stormy sea, loaded the atmosphere with moisture. Nitzsch, in his account of the health of the Russian armies, already repeatedly alluded to, gives many striking illustrations of the effects of cold and moisture in producing scurvy, and of the singular diminution in the number of such cases after an improved

method of clothing and quartering the troops had been adopted. In Parry's first voyage one of the officers alone was attacked with scurvy, and he, it was found, had been sleeping on a bed that was constantly moist. Ronsseus, whose book(*a*) was published in 1551, entertained the same views, and adduced the scurvies of 1556 and 1562 as proofs of the influence of rainy and changeable weather in producing the disease. Most of the writers since his time have added something to the evidence on this head.

Moral Depression and Inactivity.—All writers inform us that marines (who are neither the most honoured nor the most actively employed of a ship's company), skulkers, and convalescents, are the first persons attacked with scurvy; and mutiny, discontent, or despondency invariably precede the appearance of the disease, generally, too, in combination with the other causes above alluded to. Nitzsch, in his account of the Russian armies, tells us that when the recruits were, as during the Neister campaign against Charles XII., exposed too speedily after being raised to all the horrors of that brutal discipline which makes Russian soldiers such excellent machines, scurvy used to commit amongst them the most frightful ravages; but by merely allowing them time,—as in the Chocim campaign, a year or two later,—to become inured to the system, the mortality was much diminished. Mr. Ford, surgeon of the 72nd Regt., in giving an account of the scurvy at the Cape(*b*), dwells much on the influence of inactivity and dissatisfaction, to which he mainly attributes the outbreak of the disease. Lind alludes to instances in his own experience where scurvy, then very prevalent and increasing in the fleet, has been at once checked and quickly got rid of by the news of a successful engagement, or even the anticipation of one. Walters' interesting narrative of Anson's voyage has similar accounts; but the most remarkable case of all, which,

(*a*) *De Magnis Hippocratis Lienibus Pliniquæ Stomacæ Sceletyrbe, &c.*

(*b*) *Med. Gaz.*, vol. xxi. p. 250.

besides, is thoroughly authenticated by undoubted testimony, is the arrest of scurvy amongst the garrison in Breda by the distribution, by the Prince of Orange, of a little coloured water which was believed by the soldiers to be a wonderful and most expensive elixir. "The calamity," says Vander Mye, speaking of the disease which had cut off thousands of the gallant garrison of the town, "proved most fatal to the *English* soldiers, as they very early began to feed on dog's flesh, were in want of their beloved tobacco, and lay in the most wet damp barracks. Among the *French* it was but rarely met with, owing entirely to their being stationed in the driest part of the town, and to their natural sprightly disposition, being constantly employed in some motion or exercise, singing, or the like"(a). MM. Monneret and Fleury(b) assert, that in two instances they have seen scurvy originate *in mental causes alone*; and M. Papavoine(c) had an equal number of cases of the same kind. It was undoubtedly owing to the necessity of taking exercise in hunting for subsistence, that the party of seamen accidentally left at Spitzbergen enjoyed excellent health all winter, whilst a similar party left at the same spot, and most amply provided for, but who constantly remained shut up in their tent, to avoid the extreme cold, were cut off to a man by scurvy. The Greenlanders, in like manner, according to Parry, suffer from the disease only when the abundance of sea-horse flesh tempts them to inactivity.

If, then, mental depression and bodily inactivity have the least tendency to give rise to scurvy, never was there a time when these causes, combined with the atmospheric conditions before referred to, were more likely to produce a powerful effect than during the last nine months. Agriculture, hitherto the sole means of support for the great mass of the population, paralysed by new and unheard-of difficulties; hundreds of thou-

(a) Lind, p. 350.

(b) Compend. de Med. Prat., t. vii., p. 507.

(c) *Journ. Hebdom.*, t. ix.

sands of labourers and artisans out of work, and without any prospect of getting remunerative occupation; destitution, misery, and disease, on every hand, as a consequence; the ties of affection severed by the most extensive emigration, attended, in by far the majority of instances, by unexpected misfortunes and disappointment; political hopes blighted;—such was the combination of moral and physical causes which united their influence to that of climate, in producing the strange “epidemic constitution” of 1847. Still, however adequate to give rise to disease may have been the peculiar circumstances of this country, they were, in no respect, either so new or so extraordinary as to account for the production of what may be termed a new disease; and besides, the simultaneous appearance of that new disease in several of the public institutions of Great Britain compels us to seek for another cause of more general influence than either misery or suffering of any kind, and this seems to be

Want of fresh succulent Vegetables.—In four-fifths of the cases reported to me, bread and tea, or coffee, was what the patients had been living on, when attacked; the others had been using grains of various kinds, or grains and flesh or fish, but *in no single instance* could I discover that green vegetables, or potatoes, had formed a part of their regular dietary. The same exclusion (necessary or accidental) of fresh succulent vegetables is also observable in all the cases on record (with but two or three partial exceptions), where the details are given with sufficient minuteness to enable us to ascertain the point. In the two or three exceptional cases we are either directly informed that the quantity of vegetables was very limited, or the fact is so vaguely stated that we are left in doubt whether, although vegetables were used by some of the troops, those affected with scurvy may not have abstained from them altogether. However this may be, the instances are certainly far too few to be regarded as any other than very rare exceptional cases. Scurvy never seems to have been very prevalent in Ireland, as Mr. Curry, the eminent Irish scholar, informs me that he can find

no undoubted allusion to it in the Irish medical authors of the middle ages, who were generally very minute and accurate in describing what they saw. This was probably because the Irish have been vegetable eaters *par excellence*, or *πονηργοι*, as Strabo calls them. Mr. Wilde, in his Memoir on the Irish Census, informs us, that a single doubtful allusion in the Book of O'Sheil is the only manuscript testimony to be met with, and the name scurvy certainly does not occur in the Dublin bills of mortality(*a*) of the date of 1676. The disease, or at least a form of purpura, has, however, he says, long been known to the country people under the Irish name of Galar Breac (*Γαλαρ ὀρεακ*), or the speckled disease, and in English “the purples,” and “blue spots.”(*b*)

In England scurvy was formerly exceeding prevalent, being described as endemic there by most of the older authors. Chameau writes his book for the benefit of the English, and Harvey entitled his, “The Disease of London,” &c. That this should have been the case is not to be wondered at, considering that salt meat was formerly the food of the inhabitants for nine months in the year, whilst vegetable fare was little relished, and indeed unattainable; Catherine of Arragon, Henry the Eighth's queen, having to send a special messenger to Holland to bring over a gardener to raise a salad for her(*c*). The gradual introduction of the potato, and of cabbages, turnips, onions, and a long list of fruits and vegetables, now so common as to be looked on as indigenous,—together with im-

(*a*) It certainly is a very extraordinary circumstance that this city had, nearly two centuries ago, a regular registration of deaths, which in this most statistical age she is wholly denied. No registration of deaths has been kept in Dublin since the commencement of the present century, though the value of such documents the researches of Quêtelet and others have very amply proved.

(*b*) Wilde's Report on the Tables of Deaths in the Irish Census of 1841, pp. x. and xxxvi., the only extensive medical statistics with which this country has yet been presented.

(*c*) Anderson's Hist. of Commerce.

provements in living, and in general hygiène, have gone on *pari passu* with the decrease of scurvy; and whatever was wanting satisfactorily to establish between them the relation of cause and effect has been supplied by the re-appearance of scurvy consequent on a general failure of the potato crop(*a*). Still we are not to suppose that, wherever succulent vegetable food has been wanting, there we may in every instance predict an outbreak of scurvy. That would be contrary to what we know of the disease, as well as opposed to the general principles of pathology. Generalizations that apply to existences purely *ideal*(*b*) may be free from exceptions; but in *real* life we can so rarely seize all the antecedents of any given consequent, that our notions of causation can never be more than approximate. One of my former school-fellows, after being on *four* several occasions the *sole survivor* of the crew which had sailed with him to the coast of Africa, during all which time he enjoyed the most perfect health, got a severe attack of fever, which nearly carried him off, whilst attending a patient residing in a healthy district in England. It

(*a*) I have in vain endeavoured to ascertain whether scurvy, or anything like it, appeared in Ireland after the failure of the potato crop in 1741. O'Connell indeed mentions that epistaxis was then exceedingly common, whilst intense rheumatic pains, and large ecchymoses, seem to have been tolerably frequent in fever; but whether any of these were really symptoms of scurvy it is now impossible to say (O'Connell, *Morb. Acut. et Chron.*, pp. 333 and 335). That at least some cases of scurvy were met with during the famine of 1800 I have positive, though not professional evidence; and Dr. Rogan, of Derry, distinctly remembers the prevalence of scurvy during the famine of 1817, caused by a partial failure of the potatoes. That we should know so little of a period beyond the era of medical *journals* is certainly not to be wondered at, when we reflect that nearly all the medical men on the other side of the channel, and not a few of those at home, are at this moment totally ignorant that for at least eighteen months scurvy has been very prevalent in Ireland. The very able paper of Dr. M'Cormack (then of Buncrana, county Donegal), published in the *Dub. Hosp. Gaz.*, April 15, 1846, was the first public allusion to the prevalence of scurvy caused by the loss of the potato.

(*b*) See Mill's Logic, vol. i., on the peculiarities of mathematical reasoning.

is plain, therefore, that the three or four, or half-a-dozen instances of persons who, as in four cases mentioned by Dr. Christison, and in two which occurred to myself, state that they have been using precisely the same diet for some years past, are not to be regarded as contradictory of the influence of a change of food. Dietetic error seems to be the *principal* agent, but it requires, in order to its producing its effect, the concurring influence of “epidemic constitution.”

The chemical theory of diet,—which, originating, as it undoubtedly did, with Fourcroy and Vauquelin, has been so ably extended and improved by Dumas, Boussingault, and Liebig, and many other able men in France and Germany,—is one which requires but to be stated to secure for it at once the full and undoubting assent of every intelligent man. So long as life exists, the human body is continually throwing off, in the urine, fæces, sweat, &c., a great number of substances, the amount and nature of most of which cannot materially vary without injury to the economy. Now if it be necessary that a certain quantity of urea and other salts should be formed and got rid of daily, just as a certain amount of carbonic acid must be formed and discharged daily in the efforts of respiration, it surely requires no argument to shew that either all the elements of the secretions and excretions must be found in sufficient quantity in the food taken, or else the body must undergo a gradual waste. “It will not do to feed the muscles alone, or the cellular tissue, or the secretions; each portion must be nourished in its due proportion, or disease will be the inevitable consequence. It is not enough that food be given containing sufficient nitrogen, together with oxygen, hydrogen, and carbon, to supply the soft organs; but we must also give the necessary quantity of phosphate of lime for the bones, and sulphur and sodium for the bile. All the muscular and albuminous tissues contain sulphur and phosphorus as essential constituents; the brain and nerves contain phosphorus and sodium; the blood has iron in one of its elements. In

the adult animal, these various solids and fluids are becoming constantly destroyed under the influence of inspired oxygen; and if health and life are destined to be maintained, they must all be restored in equal proportions to those in which they are thrown off. In the young and growing animal, where the increase is greater than the waste, they must be in still greater quantity, especially as regards lime and iron. We have seen that a young animal requires four times as much lime as is requisite to form bone-earth with the phosphoric acid of its food; and without a sufficient supply of iron, the blood globules cannot become formed. The question of nutrition thus reduces itself to simple algebraic equations: the food of an adult must contain elements equal to the waste; the food of the young must contain elements equal to the waste, *plus* the surplus growth."

Now various chemists, and more particularly MM. Dumas and Bousingault, have instituted many ingenious experiments, in order accurately to ascertain the amount and nature of the matters thrown off from the bodies of a variety of animals daily, and it has been found that the quantities vary within what may be called narrow limits. These determinations, therefore, afford very important data for the discovery of that diet, which, though the cheapest, is yet perfectly adequate to the support of the body in a state of absolute health. We must, however, know much more as to the variation of constitution in the flesh of different animals, and in the vegetable productions of different countries, before this problem can be fully solved; and when the mere chemist is satisfied, *taste* and *digestibility*, neither of which, in questions of nutrition, can ever be safely neglected, have next to be consulted before the results arrived at can be of the least practical use. Dr. Christison, by overlooking *the salts* contained in food, has committed an error which totally destroys all the value of his reasonings. That vulgar experience which leads the bird-fancier to supply his birds with lime, should not be lost upon those who have to direct

the nutrition of the masses of the human species. Dr. Aldridge is, however, the only chemist who has made his knowledge practically available on this subject(*a*); and from his excellent little work, which I am glad to see has been adopted as authority by the Board of Health in the very judicious circular on food recently issued, I extract the following short, intelligible, general directions:

“The chief principle which should guide us in the selection of food for man is exceedingly simple. It is this: to combine a flesh or seed diet with the use of succulent roots, stems, or leaves. The former supplies nitrogen in the proper state of combination; the latter affords the inorganic elements, phosphorus, sulphur, lime, and alkalies, which are just as necessary. The Roman soldiers lived on peas and cresses; the modern Spaniards and Russian sailors use black bread and onions. According to Camden, the ancient Irish existed principally upon mushrooms, shamrocks, water-cresses, and roots. The mushrooms in this system of diet were the chief source of the nitrogen. The Lazzaroni live on coarse bread and potatoes. Now all these modes of alimentation, which have been adopted spontaneously by different and remote nations, are perfectly in accordance with the laws which we have stated, and experience has demonstrated their efficiency.”

An objection to the foregoing views, and which we have never seen fairly answered, has been often put in the following form:—If the want of fresh succulent vegetables be the principal cause of scurvy, why is it that the Greeks and Romans, who made war their chief occupation, and who often were engaged in very long sieges, either did not know the disease, or, at least, described it extremely imperfectly? Now this objection admits of being met in two ways, first, by denying the fact of

(*a*) On the comparative nutritive and pecuniary values of various Kinds of cooked Food, and the chemical and physiological Laws which must be adhered to for the beneficial Use of Diet. By J. Aldridge, M. D., M. R. I. A. Hodges and Smith, Dublin, 1847.

scurvy not occurring amongst the ancients, since we know how many far more glaring facts were passed over entirely, or only obscurely hinted at, not merely by the writers of antiquity, but by those of a later age. Still there is good reason to believe that scurvy was in ancient Greece and Rome infinitely less frequent than it was in the greater part of Europe two centuries since. To me the reason is found at once in the nature of their diet, which differed so very materially from that of the same class in our own day. All the nations of antiquity who have left behind them traces of their existence used a diet consisting principally of vegetable food, and vegetables too, the powerful anti-scorbutic virtues of which can admit of no dispute. The children of Israel, in their journey through the wilderness, longed for the leeks and onions and garlic which they had fed on in Egypt; whilst Herodotus tells us^(a) that no less than 1600 talents were paid for the radishes, onions, and garlic consumed by the workmen employed in erecting but one of the pyramids. In Rome the “*dura mesorum ilia*” were not less common; and the well-known proverb, *δισ κραμβε θανατον*, proves that in Greece cabbage must have formed the most plebeian fare. Then, the ordinary drink and favourite condiment used, not merely by the soldiery, but by all classes, being vinegar,—“*Caulibus instillat veteris non parcus aceti*,”—and the wines commonly drunk being of that very kind, the use of which, before the employment of lemon juice, was found to give to the French navy a much greater exemption from disease than was possessed by our own seamen,—need we any longer wonder that, amongst the classical nations of antiquity, scurvy was, perhaps, unknown.

I cannot here enter into any consideration of the chemical errors involved in the different dietaries I have alluded to, as it would occupy much more space than would be proper in a paper of this kind; and besides, the reader will find the subject of dietaries for the poor discussed more ably than

(a) Euterpe, cxxv.

could be done by me in Dr. Aldridge's pamphlet, before referred to.

Age.—In *all* my cases, as well as in all those in Perth, Exeter, &c., the ages of the patients exceeded eighteen years, whilst at least two-thirds were beyond the middle period of life. The same tendency of the disease to attack adults or aged persons solely or principally, is discoverable in all the accounts of scurvy handed down to us by authors, with the exception of the description of several successive outbreaks of the disease in the Orphan-house at Moscow(*a*). There, however, although we are told that no child under two years of age was ever attacked, we are not informed what was the average age of the others, and the form of scurvy was in many respects peculiar.

Sex.—The very small number of females amongst those seen by me in this city is very remarkable; but the disproportion of sexes would have been greater were it not that I happened to meet with five cases of scurvy in females while these pages were going to press. Dr. Christison treated thirty-two males and three females, and this is nearly the ratio of the sexes in the cases sent to me from the country. Some practitioners, however, have never seen scurvy in a female, and others met with it most frequently in women. The comparative exemption of women and children from attacks of scurvy is hard to explain, but is supported by the experience of the older authors; women, however, living chiefly on bread and tea, the change of diet produced by the want of potatoes is to them, certainly, by no means so great as it is in the case of males. The Hottentots in the British army at Adelaide were completely exempt from scurvy in 1836, perhaps on account of their mirth and activity(*b*).

Previous Attacks.—Several patients were affected with scurvy a second time, under circumstances which gave support

(*a*) Philosoph. Trans., vol. lxxviii. part i.

(*b*) Delmedge in Medical Gazette, vol. xxi.

to the received opinion, that those who have once had that disease are afterwards more liable to be attacked by it.

NATURE OF SCURVY.

Eugalenus, and most of the older authors, attributed scurvy to an alkaline state of the blood. Lind saw it produced in a gentleman by the extravagant use of carbonate of ammonia. And in modern times the notion has derived some support from the experiments of Magendie, Fremy, Andral, and Gavarret(*a*). Magendie even believed that he had produced a sort of artificial scurvy by the injection, into the veins of animals, of blood deprived of fibrine, or of a solution of carbonate of soda(*b*). To this excess of alkali has been attributed the non-coagulation of the blood spoken of by many authors; but, according to Rouppé, Busk, and others, scorbutic blood very frequently does coagulate. Again, Andral and Gavarret, from the analyses of scorbutic blood, ascribe the hæmorrhagic nature of scurvy to the diminution of fibrine. The diminution in the globules was also found to be considerable, but was not regarded as influencing the hæmorrhages. The same opinion is entertained on other grounds by Dr. Henderson(*c*); but the experiments of Rhodes, Busk, and Budd, are directly opposed to these results(*d*). Whatever may be the changes which take place in the composition of the blood in scurvy, it is evident that they must depend either on an alteration in the structure or action of those organs which form blood, or else in a defect in the quantity or quality of the food from which it is formed: in either case they are but effects, and not causes. Notwith-

(*a*) *Hématologie*.

(*b*) *Leçons sur les Phénomènes physique de la Vie*, vol. ii. 316.

(*c*) *Edinburgh Med. and Surg. Jour.*, July, 1839.

(*d*) See the very learned and admirable concour thesis of my friend Professor Stoeber of Strasbourg, *De l'Influence que l'Analyse Chimique et la Micrographie ont exercée sur la Pathologie, et sur la Thérapeutique*. Strasb. 1845; also *Mém. de Méd. Chir. et Pharm. Milit.*, t. lix. p. 179.

standing, as *physical signs* of healthy or diseased states, chemical determinations of the qualities of the blood are most valuable. Little, however, has yet been done in this way, and perhaps it will be found that most of the alterations that take place in the vital fluid are of a physiological and not of a physical nature. Certain it is that chemistry has as yet done nothing to explain the nature of scurvy.

DIAGNOSIS.

Nearly all authors regard scurvy and purpura as the same disease, but I have observed very important distinctions between them, which are exhibited in the following table:

SCURVY.	PURPURA.
Most frequent after 18 years of age.	Most frequent between 5 and 18 years of age(<i>a</i>).
Males chiefly affected.	Females.
Gums more or less sore and spongy.	Gums bleed sometimes, but are never spongy, and rarely sore.
Ecchymoses more frequent than petechiæ.	Petechiæ-like spots frequent; ecchymosis rarer.
Shades of eruption the most various.	At first always dark-coloured.
Lower extremities almost exclusively affected.	All parts nearly equally.
Muscular indurations nearly always.	Never.
Hæmaturia almost never.	Not infrequent.
Bloody stools very rare.	Frequent.
Hæmoptysis (true) never.	Occasionally.

(*a*) Such is my own experience, which is also in accordance with that of Sir Henry Marsh and Drs. Stokes, Churchill, Hunt, and Law, as well as with MM. Barthez and Rilliet, who fix 9 to 15 as the period when both primary and secondary purpura occur most frequently,

SCURVY.	PURPURA.
Neuralgie pains(<i>a</i>) and pain in spots invariable.	Never.
Effusions in joints frequent.	Never.
Contraction of flexors frequent.	Never.
If not interfered with, lasting for months.	Rarely lasting more than a few days.
Frequently fatal if unchecked.	Scarcely ever fatal.
Always in connexion with an error in diet.	No such error discoverable.
Affects large numbers of individuals at the same time.	Sporadic; epidemics extremely rare.
Speedily cured by lemon juice and fresh vegetables.	Cured by turpentine and purgation.

If the foregoing Table be correct, and I think it will be found to be so, the differences between scurvy and purpura are surely quite sufficient to constitute them distinct diseases. The fourth class of cases will, when occurring sporadically, be always liable to be mistaken; but a careful examination of the state of the mouth and of the skin, together with the nature of the food used, will render the diagnosis, in general, sufficiently easy.

TREATMENT.

Succulent Vegetables.—The observations already made on the article of food have in great part pointed out the treatment. Although, however, we may be quite certain that a dietetic

(*a*) In speaking of pains I omitted to mention a symptom which I have frequently observed, and which was very well marked in a patient of Mr. Cusaek's, viz., a pain in the left side, exactly like that met with in pleuritis. The natural pulse and absence of stethoscopic phenomena made diagnosis easy in all the cases of the kind (5) that occurred to me. The pain always disappeared, with the other neuralgie symptoms, by treatment directed to the scurvy alone.

error originated the disease(*a*), it no more follows that the removal of that cause will repair the mischief already done, than that the extraction of the weapon will cure the wound. Notwithstanding, in scurvy, in the vast majority of instances, little more is necessary than to secure to patients an abundant supply of succulent vegetables. When the garrison of Breda, defeated by disease, and not by the enemy, opened their gates to receive the Spaniards, the abundance of green vegetables that was brought in along with them, put an end to the scurvy in three days. And Lord Howe's fleet afforded an equally remarkable instance: owing to the extreme severity of the winter of 1794, vegetables were dear, and little or none were taken on board; the consequence was, that in a few weeks scurvy became so general that there scarcely remained enough of healthy hands to work the ships. Returning to Portsmouth in this condition, 5000 cwt. of salad per day was regularly distributed amongst the sailors, and in about three weeks the disease had entirely disappeared. The fleet then put to sea a second time, but the scurvy broke out again, when, on investigation, it was found that those who had not made use of the vegetables distributed to them before leaving port were the *only* persons attacked. My note-book supplies me with at least some hundred references to cases of a similar description, though not so striking. Those who feel curious upon the point will find quite enough in Lind's invaluable treatise. At Steevens' hospital, water-cresses and bread for breakfast; with fresh meat,

(*a*) Mr. J. Price, of Waterford, to whom I am indebted for accounts of a very large number of cases, and much information respecting the diseases of the season, in one of his letters writes thus, with respect to Waterford: "At first and till lately scurvy was nearly confined to a class above what could be called poor, such as shoemakers, carpenters, tailors, &c., and their wives, who had been living on bread and tea, or stirabout (mostly of Indian meal) and milk. The destitute were exempt from it. I really can attribute this to nothing else but the *soup given them by the Quakers, which was well seasoned with vegetables.*"

cabbage, and other vegetables, together with porter, for dinner; has been the treatment ordinarily employed; and the patients are generally cured in two or three weeks. My own patients, being chiefly very poor persons, used the same diet, with the exception of the flesh meat and porter, and their recovery was equally rapid; but the pallor and much of the feebleness did not so soon disappear, from the poorness of the fare which poverty compelled them to live on. In the South Dublin Union a little flesh meat and boiled cabbage, turnips, and parsnips, with porter or wine, was found always beneficial, but, without other means, generally tedious in effecting a cure. Dr. Corrigan's routine treatment was, a liberal diet of fresh meat, with bread, cabbage, leeks, and onions, and sometimes porter and wine. A drachm of spirits of turpentine was also given three times a day. The turpentine never produced purging, but seemed simply to stimulate: it was always used in connexion with leeks and onions, &c., and was believed to facilitate the cure. Recovery always began to take place in a week or so after admission, and few patients remained in the hospital more than a month. In my experience these different methods were tried under such very different circumstances that it is extremely difficult to compare together their therapeutic means alone; but the recorded experience of a host of observers in different countries would place leeks, onions, and water-cresses very high indeed on the list of antiscorbutics; whilst several, to whose works, however, I cannot at this moment refer, state, that boiling greatly impairs the value of cabbages and other vegetables used in the treatment of scurvy. Sorrel, which is much valued by the Greenlanders and Esquimaux, has been used with great success in different parts of Ireland during the present year; and boiled nettles, eaten like cabbage, have also been reputed efficacious. The following plants have likewise strong testimony in their favour: wall pepper, *herba vermicularis*(a); white

(a) *Miscel. Curios. Medico-Phys. Academ. Natur. Cur.* ann. 6 et 7, Obs. 22.

maiden hair, *ruta muraria*(a); pilewort, *chelidonium minus*(b). Dr. Aldridge, on chemical grounds, gives a decided preference to plants of the classes umbelliferæ and cruciferæ, on account of the quantity of sulphur which they contain; and, whether for this reason or not, there is no doubt that they are all highly antiscorbutic in their properties. The *cochlearia officinalis* is called scurvy-grass, in allusion to the purposes to which it is applied in the northern regions. Bachstrom, speaking of it, tells us of a sailor who was in such a wretched state from scurvy that he was put ashore on Greenland, and abandoned, in the belief that his recovery was impossible. By chewing the scurvy-grass that grew around him, he was in a few days enabled to rejoin his comrades, who thus became acquainted with the virtues of the plant. *Dried* vegetables are generally most disagreeable and difficult to take; and all kinds and preparations of *dried* antiscorbutic plants were tried by Kramer,—when, about the middle of last century, the Imperial troops in Hungary suffered so dreadfully from scurvy,—and they were all found utterly useless; but the few *fresh* plants that could be procured proved as efficacious as usual.

Vegetable Acids.—The extraordinary powers of the juice of oranges, lemons, and other hesperidiæ, in controlling the ravages of scurvy, are fully announced in the very first work (Ronsseus) in which the treatment of that disease is alluded to. In Kramer's excellent book it is also dwelt on, and the most striking instances, illustrative of its wonderful preservative powers, are found scattered through all the older authors; yet, with that singular perversity which mankind so often exhibit in regard to great discoveries, the real value of the remedy was not fully acknowledged until within a few years of the close of the last century. Few of our readers can require to be informed what scurvy was in former ages, parti-

(a) *Etmuller, Schroderi Dilucidati Phytologia.*

(b) *Act. Haff. t. ii. Obs. 75; Etmuller, op. cit.*

cularly when, in long voyages, large numbers of men were for many months kept crowded together in an ill-ventilated and filthy ship, and living exclusively upon dried provisions. More than one well-armed and powerful vessel of war has been seized, without firing a shot, by an humble merchantman, from her crew being unable to attempt a defence, or even to guide her course ; and more than one treasure-laden galleon, from America or India, has been fallen in with at sea with every sail set and every spar standing, but on her deck only the putrid bodies of the miserable victims of the “seaman’s plague.” These things are known to every reader of history, though but few imagine that they belong almost to our own time. Admiral Hosier, in 1726, at Bastamentos, lost the entire crews of seven sail of the line, twice over, and died in consequence of a broken heart ; and at the siege of Thorn, not long before, 7000 of the garrison, and a great number of the inhabitants, died of scurvy in the course of a few months ; while the Channel fleet, after a cruise of a few weeks, has often sent ashore 2000 men affected with scurvy. By the writings of Lind, and the exertions of Sir Gilbert Blane, at length, in 1795, lemon-juice was ordered to be regularly used in the navy. In five months from this date 3000 severe cases, and twice as many slight ones, had been perfectly cured ; and in two years so completely was the disease extirpated that its very name has not since been inserted in the printed returns.

I used lemon-juice in the treatment of two very severe cases : one, a patient in Camden-street, which has been before alluded to ; the other, a man residing in Townsend-street. In both, the influence of the remedy was the most extraordinary thing I ever saw ; the patients, who were regarded as in a hopeless state, being enabled to sit up and take their food with cheerfulness in the course of two days. Drs. Law, Hunt, Stokes, O’Ferrall, Kirkpatrick, and M’Clelland, have also used this remedy with the most favourable results. I gave half an ounce of lemon-juice, with sugar and water, thrice in the day. A

free state of the bowels sometimes followed its use, but this seemed always attended with benefit. Wine, added to the lemon-juice, as recommended by Lind, often had the effect of obviating the purging.

In the case of a gentleman affected with scurvy of a very severe description, who was attended by Dr. R. W. Smith, the eating a single *rhubarb tart* produced a most decided amelioration, equally sensible to the patient and to his friends. *Grapes* were found by Fodéré very useful, but only when they were *sour*; and Lind and Trotter ascertained by direct experiments that sweet, ripe fruits are very inferior, as antiscorbutics, to the same fruits unripe and sour. An old lady, who happened to see some of the drawings of scorbutic spots in my possession, informed me that a similar disease prevailed in her neighbourhood (County Antrim) in 1800, and that the peasants invariably cured themselves by drinking the expressed juice of *crab-apples*. Several of my country friends have prescribed “gooseberry fool” with great success. In short, there is, in my own mind, not the least doubt that acid fruits and green vegetables will be found to cure almost every case, and more rapidly than any other means.

Sir J. M'Gregor mentions instances of apparent ophthalmia, with conjunctival ecchymoses, which, after resisting for months every kind of treatment, were cured in a few days with lemon-juice. Cases, undoubtedly identical with his, I have already described; but many more, occurring in private practice, and not recognised, have been lately brought to my notice. They were all remarkable for their apparently unaccountable origin and utter want of amenability to treatment.

Citric acid, and lemon or orange juice, being both very expensive remedies, the very limited means at the disposal of most public institutions in this country renders some cheap substitute for it very desirable, and I was, therefore, glad to have an opportunity of seeing tested the efficacy of the combination of nitrate of potass with vinegar or lemon-juice, so very

strongly recommended by Drs. Paterson(*a*) and Cameron(*b*). The routine treatment of scurvy at the North Union Hospital for some months, has been the following mixture: nitre, two drachms; bitartate of potass, half an ounce; vinegar, with treacle, of each two ounces, and four ounces of water. Two table-spoonfuls of this mixture were given three times a day, and with very decided benefit. The medicine has an agreeable taste, and when it was wished to make it act on the bowels, it was only necessary to add a little more cream of tartar. This mixture has the great merit of cheapness; but from what I have seen of the treatment of scurvy, I should in all cases that it was possible to do so, give a very decided preference to the fresh vegetables with lemon-juice. Dr. A. Henderson states that an extensive experience at sea leads him to recommend, in very strong terms, nitre dissolved in plain water, and given in divided doses to the extent of from two to four drachms in the day(*c*). Dr. Henderson attributes *all* the success hitherto met with in treating scurvy, not to any medicine given, but to the good food, cleanliness, ventilation, and warm clothing used along with it,—a statement which, while we attach fully as much importance as he possibly can to these adjuvants, deprives his recommendations of whatever force his experience might give to them, by shewing him to be an enthusiast in pushing the claim of his own nostrum, and utterly blind to the great mass of evidence already upon record.

As we know that sorrel, one of the most efficacious of anti-scorbutics, owes its acid taste to a mixture of bioxalate and quadroxalate of potash, and as citric acid is easily resolved into oxalic and acetic acids, I have prescribed within the last few days, for some patients affected with scurvy, half a drachm of oxalic acid, with a scruple of liquor of potass, in eight ounces of water; an ounce to be taken three times a day; and in some

(*a*) Treatise on Scurvy, Ed. 1795.

(*b*) Letter to the Commissioners of Victualling, 1829.

(*c*) Ed. Med. and Surg. Jour. vol. lii.

other cases, the same amount of oxalic acid dissolved in eight ounces of vinegar, to be given in the same doses. The medicine has a very agreeable acid taste, and, so far as my trials have yet gone, seems to act very advantageously.

Bark, iron, and the mineral acids, I have seen used in several cases; but my experience of their efficacy is in perfect accordance with that of all those who have seen scurvy on an extensive scale. In a few cases they at first produce very beneficial effects, but they very seldom bring about a complete cure (unless, as in the case of a patient entering an hospital, where *dietetic* means are used along with them), and they are often worse than useless. An error of diagnosis had caused *mercury* to be administered in two cases that came under my observation: great increase of suffering was the consequence. Kramer tells us of 400 patients at Belgrade, to whom mercury was given, *with a fatal result in every instance*.

Several of the military medical officers at the Cape of Good Hope speak very strongly in favour of low diet, bleeding, and purging, in connexion with the use of vegetable acids, in the treatment of scurvy. They, of course, limit their recommendation to such cases as seem to be plethoric and able to bear depletion. In this country we never meet with such cases in hospital; but Dr. Stokes has observed much benefit to result from the repeated application of leeches to the discoloured parts, when very painful. The relief was in all cases both speedy and permanent. At most of the other hospitals cold water dressing was applied to the legs, and with a good effect.

The following are what I have seen most benefit from in relieving the state of the mouth: nitrate of silver applied solid; muriate tincture of iron; solution of chloride of soda; and lastly, more effective than any, undiluted tincture of rhatany.

The dry and unperspiring state of the skin in scurvy has at all times attracted the attention of physicians, and has led to the administration of diaphoretics, &c. They have sometimes been found beneficial where better remedies could not

be had. Warm and cold pediluvia, burying in the earth, &c., have also been used with the same intention, and with some success; but my own experience is well summed up in the words of a very old author:

“The scurvy is the most loathsome disease in nature; for which no cure is to be found in your medicine chest, no, not in the best-furnished apothecary’s shop. Pharmacy gives no relief, surgery as little. Beware of bleeding; shun mercury as a poison: you may rub the gums, you may grease the rigid tendons in the ham, to little purpose. But if you can get green vegetables; if you can prepare a sufficient quantity of fresh, noble antiscorbutic juices; if you have oranges, lemons, or citrons; or their pulp and juice preserved with sugar in casks, so that you can make a lemonade, or rather give to the quantity of three or four ounces of their juice in whey, you will, without other assistance, cure this dreadful evil.”(a)

As all the afflictive dispensations of Providence are productive of some good results, it is to be hoped that the general prevalence of a very serious disease, caused by an error in diet, will lead chemists, physiologists, and physicians to study the important subject of nutrition as applied to man (for the agricultural aspect of the question has been abundantly attended to), with increased diligence and zeal, and also induce those who have the management of public institutions to adopt a dietary based on those scientific principles which have already been amply sanctioned by experience. To such persons I know of no better guide than Dr. Aldridge’s little work, before referred to.

Localities where the Disease has appeared in Ireland.—The first public intimation of the outbreak of scurvy in this country was contained in a notice by Dr. O’Brien of Naas, published in the Dublin Hospital Gazette, January 15th, and February 1st, 1846, of very peculiar symptoms caused by eating the diseased potatoes. Febrile symptoms, with diarrhœa

(a) *Krameri Medicina Castrensis.*

and an evanescent eruption, caused the disease to be mistaken for a gastro-enterite, and probably the bowels were really in some degree affected with inflammation in consequence of the indigestion of such very unsuitable aliment. The cases were very remarkable, from the head, neck, and upper extremities. being the parts principally affected. In the Number of the same Journal for April 15, Dr. M'Cormick gave an account of the disease as it appeared in the county of Donegal, where his inquiries led him to believe it was then exceeding prevalent, and had existed for several months. Dr. M'Cormick was the first to point out the true nature of the affection; and his paper, which has been before referred to, is well worthy an attentive perusal. The forms of scurvy that he met with have been described in the foregoing pages. I cannot find that the disease was noticed anywhere during last summer; but Dr. Tabuteau, of Portarlinton, met with it under a rather unusual form during the autumn and winter. He describes "ulcers of the fauces, discharging a thin, ichorous fluid, bleeding on the slightest touch, and exquisitely painful," as having been observed in almost every case; and says, the patients were principally those who had lived on the diseased potatoes, though the poor, fed on Indian meal, were not exempt.

This year we have information of the appearance of true scurvy in all the cities and large towns in Ireland, with but two exceptions, and all the dispensary officers with whom I have communicated have met with cases of the same disease. Drs. Little and Lynn, of Sligo, have "met with no instance of true scurvy, but innumerable cases of livid, ulcerated gums, analogous to scorbutus, severe cases of sloughing of the lips therefrom, and a few cases of purpura." Dr. Cuming, of Armagh, has not himself seen any cases, but he finds by inquiries of the officers attached to medical charities in his locality, that scurvy prevails there, with this peculiarity, that diarrhœa, anasarca, and desquamation of the cuticle on the arms, legs, and behind the ears, are very constant symptoms. In Waterford, Cork,

Kilkenny, and some other localities, such was the prevalence of the disease, that Dr. Tanner informs me he has frequently prescribed for twenty scorbutic patients per day at the South Cork Infirmary. In Cork, diarrhœa was a very constant symptom, and of course œdema frequently followed. Dr. Williams, of Castletowndelvin, has met with the disease equally in males and females, and no less than seventeen of his patients were aged from 2 to 16. A single case of a patient under the care Dr. R. W. Smith is the only other well-marked instance of scurvy affecting children that I have heard of in Ireland. Dr. Cane's letter on the peculiarities of the disease in Kilkenny will be laid before the reader in the present Number, and Dr. Lalor, of the same city, has met many cases of the disease. In all parts of Ireland the change from the use of potatoes to a diet of Indian meal, or more frequently bread and tea, was the imputed cause of illness.

In concluding this paper, which I find has grown to dimensions far beyond what I anticipated in the commencement, it only remains for me to express my warmest gratitude to the many gentlemen who have contributed the materials for its composition. In addition to those already mentioned, I am also indebted, for cases, observations, or general information, to Dr. Fuller, of Oswestry; Dr. Daly, of Hull; Drs. Hobson and Whittle, of Liverpool; Dr. Watson, President of the Faculty at Glasgow; Dr. Townsend, Cork; Dr. Daly, Mallow; Dr. Rogan, Derry; and Mr. M'Swiney, of this city. Dr. Griffin, of Limerick; Dr. Fitzgerald, of Bruff, in the same county, and Dr. Cuppaidge, of Castlerea, county Roscommon, are the only gentlemen who have not met with scurvy; and, from the inquiries which they have instituted, the disease would appear not to have broken out in these counties, although I am not at present in possession of any information which would serve to explain this anomaly. The addresses of the above gentlemen sufficiently shew that the disease has made its appearance in all parts of Ireland, and, probably, equally exten-

sively in Great Britain. I am informed that nearly all the labourers on the Glasgow and Montrose railway (3,000) have become scorbutic from living on bread and coffee.

A number of letters requesting information on the subject of this epidemic having been addressed to practitioners in different parts of the country, their answers have been incorporated in the foregoing essay. The following communication, however, which the Editor has just received from Dr. Cane, of Kilkenny, is, from its length, its accuracy, as well as the peculiar features and extreme virulence of the disease in that locality, worthy of insertion separately:

“ *The purpuric fever* is a subject deserving the utmost attention, and full of the deepest interest, not merely upon the grounds of the novelty to us of many of its symptoms, but as modifying many of our views, and as affording matter for deep consideration in connexion with dietetics and hygiene.

“ I do not know whether under the word you mean merely the fever with purpuric eruption, and with or without hæmorrhage; or whether you include with it the deadly diarrhœa, dysentery, and anasarca, which, as emanating from the one cause, might be comprehended under some generic term. But this is a matter for your consideration, and I should rather detail than theorize.

“ The epidemic here has been of a very mixed character, including febricula; simple fever, from stomach derangement; the petechial, or maculated fever; and the fever with purpura. This latter fever has been very frequently complicated with hepatic derangement, and in many cases with intense jaundice, and not unfrequently with nasal or other hæmorrhage. The tendency to bowel disease has been very great: in some cases it was present all through the fever, but in most cases it came on as the fever went off, setting up its own peculiar fever. It very frequently made its first appearance in the convalescent wards; but, whenever it appeared, it soon

became most unmanageable, and has been fatal in a vast majority of cases, constituting the great bulk of the present mortality. *Post mortem* examinations revealed, very generally, extensive ulcerations along the alvine track of mucous membrane; but I apprehend that ere the ulcerations formed there was a general constitutional tendency to serous effusion, not merely from the bowels, but everywhere, as most of those patients became rapidly œdematous or anasaruous, and rarely complained of pain or tenesmus, or abdominal irritation of any kind, until lax bowels had been present for days, and the body had become swollen, the aspect tallowy, and the lips blanched,—a sort of anemic or chlorotic aspect, remarkably characteristic of the disease and of the class,—for this form of the disease appeared only amongst those who were poor and badly fed.

“ The fever accompanying the purple eruption was sometimes extremely active, but very frequently extremely mild; it was usually ushered in with a rigor, hot skin, moist, white, or light brown tongue, and quick pulse; the eruption was characterized by its purplish colour, and its not disappearing upon pressure with the finger, like the petechiæ of ordinary fever; this eruption sometimes appearing towards the close,—sometimes as though it were critical,—fading off in five or six days,—the fever occupying ten or twelve days. The spots varied from the size of a flea-bite to ecchymoses the size of the hand, and, in some bad cases, separated the cuticle like pomphylx, being filled with reddish serum. In those cases, the slightest pressure, or knock against the bed, or squeeze of the nurse’s fingers, would form ecchymoses. In the majority of cases the spots were few and scattered; but in others thickly studded together.

“ It would seem as if the one cause had differently affected different portions of the capillary system: the blood capillaries let out their contents in the subcutaneous tissue, constituting purpura and ecchymoses; in the cellular membrane, constituting œdema and anasarca; in the bowels, constituting diar-

rhœa and true bloody flux, which is more frequently present than the muco-sanguineous stools of dysentery. From some of the *post mortems* it would seem as if the ulcerations in the small intestines were *on the mouths of the lacteals*.

“Latterly I have seen some cases of the purpuric fever amongst the better or more comfortable classes, but at first it was principally among the poor; and the peculiar diarrhœa, and the anasarca, were, and still are, peculiar to the poor, the ill-fed, ill-housed, and the miserable. The purpuric fever is communicable by contagion; at first, endemic to famished districts and classes, then epidemic, then contagious.

“Relapses, or forms of secondary febrile attacks, without the spots, are frequent after the purpuric fever. In these relapses there is usually much gastric and hepatic derangement. The green vomit is of very frequent occurrence.

“The fatality from the purpuric fever has been small, but from the diarrhœa and anasarca the mortality has been immense.

“The number of cases presenting large ecchymoses, and with tendency to rapid gangrene from slight pressure, have greatly diminished of late. This I consider to be consequent upon better feeding, as well as on the influence of better weather: but at first (some three or four months ago) every ward held one or two cases where, from the appearances on the arms, and over the scapulæ and hips, a physician unacquainted with the disease would suppose the patient had been bruised or beaten; and in such patients the slightest bruise or pressure caused blackening, and subcutaneous effusion of blood. At that period, too,—whether in the petechial or purpuric fever,—there was a great tendency to gangrene; gangrene of the buttocks, of the rectum, of the soft parts over the scapulæ, of the toes, of the pudenda, of the lips, of the cheeks and throat. There were cases of cancrum oris amongst adults, and in one remarkable case gangrene in the larynx, one of the cartilages of which was spit up. These terrible symptoms are much less frequent now.

“ The complication of jaundice with purpura has been very remarkable, and these cases, where large purple specks rested upon a yellow skin, were quite subjects for the artist. I would not, however, venture to theorize much upon this complication, because the tendency to jaundice has been rather great even in the better classes, and with other diseases. I saw it occur here in gout, and in two remarkable cases of pneumonia, where the sputa continued, for days after the inflammation had subsided, so decidedly icteric as to stain the shirt and linen yellow, and to look itself like saffron-water.

“ You have used the word *scurvy*, and unquestionably these diseases and symptoms are analogous to the state of the system which that name designates; it is a sort of ‘famine poison.’ I consider that the purpura, with or without its hæmorrhage, the diarrhœa, whether serous and nonsanguineous, or sanguineous, and the anasarca, are all results from one cause,—a deteriorated state of the system. I will not stop to argue whether the effusions resulted from deterioration of the blood itself, or were the result of relapsed and feeble capillaries; I will leave the humoralist to dispute it with the solidist; but the human mass was poisoned, and bad food, defective in quality and quantity,—and, in many cases, a mischievous nutrition, from unwholesome diet, produced the state of the human body leading to these maladies.

“ The purpura I have been describing is exceedingly rare amongst the better classes here; when they get fever,—and it (fever) is extensively spreading amongst them,—they get the fifteen days’ maculated, measly, or petechial fever; but there is a portion of the better classes and also of the well-fed who get the purple fever,—they are the physicians and chaplains of the workhouses, fever hospitals, and dispensaries,—men who have already had petechial fever, and are not likely to have it again, but who, daily and hourly breathing the poisoned atmosphere where the sick are crowded together, become at last saturated,

as it were, with the endemic poison, *and they are liable to take the purple fever.* Of this I have seen several instances.”

Dr. Cane has likewise furnished us with a series of most graphic illustrations of the purpuric fever, and several of its symptoms and complications. From these it would appear that the disease in Kilkenny has been more acute in its attacks than with us. Communications of the nature of the above are of immense value; we earnestly invite our other country brethren to afford us some.—ED.

ART. VI.—*On the Mortality of Medical Practitioners from Fever in Ireland.* By JAMES WILLIAM CUSACK, M. D., President of the Royal College of Surgeons, and WILLIAM STOKES, M. D., Regius Professor of Physic in the University of Dublin.

It is necessary to state the circumstances which have induced us to direct our attention to the subject of this paper, the importance of which requires no comment, particularly at the present crisis.

In the year 1843 the Medical Charities Bill was brought forward, and we were not without hope that some recognition of the labours and risks of our professional brethren in Ireland would appear in the Act of Parliament; for we felt that the amount of these labours, and the nature of the risks, were not known to the Government.

In common with most of the hospital physicians and surgeons of Dublin, we had to deplore the loss of many of our most meritorious pupils, who, after a brief period of country practice, had fallen victims to typhus fever contracted in the discharge of their duties; and we felt that justice required not only that the remuneration for attendance on fever hospitals and dispensaries should be fixed at a liberal scale, but that some provision ought to be made for the widows

and children of gentlemen who had lost their lives in the public service. We shall shew, even from a limited and imperfect investigation, that the risk of life in the public medical service of this country is so great, as to demand the serious attention of the Legislature.

We had long mutually lamented the hardships to which medical practitioners in this country are exposed, and we came to the conclusion, that, if a correct statement of the average mortality of the medical profession in Ireland was submitted to Government, it could scarcely fail of making a suitable impression, and exercise a favourable influence in determining the scale of remuneration for attendance on fever hospitals or dispensaries.

In order to arrive at some determinate data, we addressed a circular to a considerable number of physicians and surgeons in Ireland, to the effect,—that as the regulation of the medical charities of Ireland was a question in which the Government and the Profession were much interested, we were induced, by a sincere desire to promote the welfare of our medical brethren, to request of them to furnish us with returns of professional mortality.

To this letter was appended a number of queries, relating to the names and localities of the different medical institutions; the number of medical attendants who had been employed in them during the last twenty-five years, or since their establishment; the number of medical men who had died while serving in them; the cause of death; and the number who had suffered from fever and other infectious diseases.

The statistical results obtained from the answers to this communication shall be presently considered; but before entering on them we wish to remark on the peculiar circumstances, in relation to attendance on fever, to which the Irish practitioner is exposed.

It is an admitted fact that, from whatever cause, or combination of causes, it may arise, Ireland has, from an early

period, been far more productive of continued fever than either England or Scotland. Epidemics, affecting great numbers of persons, have succeeded one another at short intervals of time; and it rarely happens that the towns are free from fever, while minor outbreaks of the disease occur continually in the rural districts. In this way Ireland may be said to be never free from fever, which, though necessarily not arising from contagion, is propagated by it in the most decided manner.

The extent to which fever exists in Ireland, and its influence on the mortality, has been strikingly shewn by the returns of the late Census. Mr. Wilde has given a table of the mortality from fever, and the general mortality of the province of Leinster for ten years, ending in June, 1841, a period, be it observed, not characterized by any remarkable epidemic of fever. From this it appears that, while the total mortality was 317,802, that from fever was not less than 29,821, amounting, as Dr. Graves observes, "to a fraction less than one-tenth of the whole mortality; whereas, in London, the fever deaths do not amount to more than one-fiftieth of the total deaths. This difference becomes more striking from considering that deaths in Dublin from fever are actually double the deaths from the same cause in London. The last Census made the population in London amount, I believe, to one million and a half, while that of Dublin is three hundred and sixty-two thousand."(*a*)

This is not the place to enter on the question of contagion at any length; for our purposes it is sufficient simply to state that we believe the disease to originate in combinations of causes, the exact nature of which has not been ascertained. When produced, however, whether in isolated examples or in epidemics, it is propagated by contagion, and that to a degree far more remarkable than what is observed in cholera. Of the propagation of fever in Ireland by contagion we have already observed that we have no doubt, but it may be right to state,

(*a*) Clinical Medicine, p. 46.

in general terms, the kind of facts on which our conviction is founded. They are:—

1st. The number of cases of the disease occurring in individuals intrusted with the medical care of the sick, including physicians, students, nurses, and clergymen.

2nd. The circumstances attending its spreading in families.

On this subject the late Dr. Whitley Stokes, in his *Observations on Contagion*, published in 1818, has the following important remarks. After speaking of the fact, that in a family of twelve the disease had been known to visit eleven individuals, and that thus three months had passed before the family were free from the disease, he observes:

“ In the general course of the epidemic, in the district in which this family resided, one out of seven took the fever. Had the family consisted of fourteen it might have been said, before the epidemic, that if two of that family sickened they bore only the average share of the general calamity; in the family of twelve, the sickening of two would have been more than their average share, and the sickening of eleven so much more, that the chance against that event would have been nearly 189,600,000 to 1.

“ I proposed the following problems to a friend particularly acquainted with this species of computation:

“ Problem the first.

“ An epidemic prevails so severe, that one out of seven sickens. A family of twelve is selected in a particular district, before the epidemic has visited it; what is the chance that eleven out of that family shall take the disease, supposing the sickness of one of the family does not promote the sickening of another, and supposing the family not unusually liable to disease?

“ Answer; the probability against the event is, 189,600,000 to 1, if the population amount even to seven thousand.

“ Problem the second.

“ The same general conditions being assumed, and also that

the number of the inhabitants in the district in question is seven thousand. What is the chance that in any family of twelve, within the district, eleven will sicken?

“ Answer,—it is above 300,000 to one, that no family of twelve persons in a population of 7000 will have eleven sick.

“ All this according to the conditions that the sickening of one does not promote the sickening of another.”(*a*)

It is admitted that the mortality of fever is much higher in the better than in the lower classes of society; and it is certain it will be found that, when medical men are attacked with the disease, it is eminently malignant. This remark applies to the cases of medical students as well as to those of practitioners. In Ireland few medical men escape fever; though, in several cases, the disease did not occur until the individuals had attained advanced age. Of this the cases of the late lamented Drs. Clifford, of Trim, and Lloyd, of Roscommon, are examples, and others might be adduced.

The opinion commonly received, that the individual who has once had typhus fever is safe from future attacks, is not well-founded. That a certain degree of immunity is thus produced, we think, is certain; but that many persons in Ireland have suffered from a second, or even a third, attack of fever, at long intervals of time, must be admitted. Our returns shew that in several instances the medical officers of dispensaries have had typhus fever more than once; so that the going through the ordeal of fever,—always, as we have already stated, a most trying one to the medical man,—has not even the advantage of assuring him against a second attack, the more serious as he will then be more advanced in life, his vital powers lower, and his moral energies more exhausted.

It is difficult to explain why the fevers of medical men should be so commonly of a bad character. That the virulence of the disease is proportioned to the dose of contagion we be-

(*a*) These calculations were made for Dr. Whitley Stokes by the late celebrated Dr. Brinkley, Lord Bishop of Cloyne.

lieve; and when it is considered that many of our brethren have been exposed not only to a concentrated contagion, but that the morbid influence has long acted upon them, we can conceive why their fevers should be so severe. And it too frequently happens that, urged on by a sense of duty, they continue their exertions, although in the earlier stages of the disease; and, while already the marked victims of fever, they still labour to save their fellow-men.

Whatever be the cause, it is certain that the fevers of medical men in Ireland are almost always of a bad character; and this even when the epidemic is not of the worst kind. The fever is generally of a low type, with eruptions of maculæ often coming out at a late period of the case. Nervous symptoms, of all the phenomena of fever the most alarming, commonly exist to a great degree. And as a result of this condition, the use of wine, which, among the lower orders, has so happy an influence on the disease, can, in many cases, be used but sparingly, if at all; and this at a time when the debility and prostration calls for its exhibition. If to this we add the injurious influence which the knowledge of danger must have on the system of a man feeling that he is struck down by the disease under which he has seen so many sink, and tortured by the thought of leaving a young and unprovided family, we can understand how it happens that the country is so often deprived by death of so many of its best educated and most devoted servants.

Thus, the medical practitioners in Ireland are placed in a position very different and far more serious than that of their brethren in Great Britain; for while the latter have only to contend with infectious fever occasionally,—and, rarely indeed, in the rural districts,—the Irish physician has to combat it in all situations, and at all seasons; and, in consequence of the peculiar condition of the peasantry, expose himself, often under the influence of cold, wet, fatigue and hunger, to its most concentrated contagion.

The system adopted so generally in Ireland, of isolated dwell-

ings, has an important influence on the fatigues and risks of the practitioner. The poor cottiers live, for the most part, not in towns or villages, but in their solitary cabins, on their plots of ground, and are thus removed from many of the advantages of social life: their dwellings are hovels, and scattered over the length and breadth of the land; and when an epidemic visits the country, it is easy to see that the position of their inmates must be, to the last degree, unfavourable; their distance from the residence of the physician, or from any other means of assistance, is a cause why disease may continue for days in the family, unknown to any but its members. Want, damp, dirty habits, and bad ventilation, all concur to render the disease virulent; and by the time that the medical man visits the sick, the hovel, with several of its inmates in malignant typhus, is one focus of concentrated contagion.

The causes, then, which appear to us to account for the remarkable mortality of medical men in Ireland may be thus enumerated:

- I. The constant existence of fever in the country.
- II. The frequent epidemics of the disease.
- III. Its highly contagious nature.
- IV. The want of ventilation and cleanliness in the houses of the poor.
- V. The fatigue consequent on visiting a number of houses scattered over large and often wild districts.
- VI. The moral and physical depression which the repetition of these influences is sure to produce on the practitioner, particularly when he reflects on his frequent inability to relieve the victims of want and disease by whom he is surrounded.

The mortality of medical men in the cholera bears no comparison to that from fever. In Ireland the number of medical men who sank from cholera was comparatively small, and, except at Sligo, there was no important loss of life among physicians. Very few students or nurses contracted the disease; and we are fully warranted in the statement that the contagion of cho-

lera, even in its earliest outbreak, had much less intensity than that of typhus, as it permanently exists in Ireland.

Let us now turn to the evidence afforded by the information acquired by the returns to which we alluded at the commencement of this article.

It must, however, be particularly borne in mind, that these researches do not approach a later period than 1843, and, consequently, the calculations grounded upon them do not apply to the question of the mortality induced by the present epidemic. This will require another and a separate inquiry, to which we earnestly invite the attention and co-operation of our brother practitioners.

From the returns to our inquiries, when statistically arranged, we learn that, during the twenty-five years prior to the date of the returns in 1843, 1220 practitioners were in charge of 406 medical institutions, a number very much less than in reality exists, or had existed during that period; but the error, if error there be in these as well as the other numbers in these returns, is to be placed to the credit side of the account, for the errors have been those of *omission*, not of *commission*. It must also be remembered, that the entire 406 medical institutions from which returns were received have not existed for anything like twenty-five years; but this error is likewise to be placed to the same side of the account. Of the 1220 medical men who have occupied these situations during the period specified, 300 have died prior to 1843,—nearly *one-fourth* of the whole, an immense mortality, when we take into account the ages at which the deaths occurred, and consider the various other circumstances attending this calculation.

Now, when we reflect that the nearest and most accurate approach to a general average mortality in Ireland is but one in fifty-two at all ages; and when we consider that the mortality among medical men above specified must have been chiefly spread over a period from twenty-five to fifty years of age—the usual age of medical men holding dispensaries,—it makes the

mortality among this class enormous. These deaths, moreover, it must be remembered, do not include those of the apothecaries, assistants, pupils, deputies, or other constituents of the medical staff attached to these institutions; nor do these numbers include the physicians, surgeons, pupils, and apothecaries unattached to public medical institutions, hundreds of whom must have died within the period specified. Of the entire deaths, 132 died of typhus fever, or nearly in the proportion of three to seven from all causes. It is proper here to remark, that the 168 deaths from other causes, not typhus fever, include many from other contagious diseases, cholera, scarlatina, &c., also acquired in discharging the public duties attached to the institutions which these medical officers served. 568 out of the 1220 suffered from typhus fever, or forty-six per cent. of the whole; of these 568, twenty-eight had fever twice, or 1 in every 20; and nine three times, or 1 in every 63, to speak in round numbers. As we already remarked, certainly one-half of the 406 medical institutions had not been in existence during the first twelve and a half years over which the inquiry extends; and it is evident that, by lessening the periods, the mortality must be increased: these are, however, statistical speculations, in which we would rather not indulge. The cities of Dublin, Belfast, Cork, Kilkenny, Galway, Limerick, &c. (nor, in fact, any of the large towns, such as Sligo, &c.), have not been included in these returns, which have been received from dispensary and fever hospital attendants almost entirely located in the rural districts. On this account, the returns, with few exceptions, have no reference to the mortality among the infirmary surgeons and the medical attendants in the cities and larger towns, which we know to be considerable.

We learn from the Census of 1841, that the proportion of deaths from fever to the mortality from all causes was 1 in every 10.59, and 1 in 3.4 of the deaths of the total class of epidemic diseases; whereas the deaths from fever among the medical profession, as far, at least, as these returns enable us to judge

(and it must be remembered that they necessarily omit a great number of deaths), shew a mortality of not less than 1 in 2.29.

We are able, in part, to supply the omission of town mortality of medical men from Mr. Wilde's special Sanitary Report on the city of Dublin, where we find that thirty-six medical practitioners died of fever during the ten years over which the Census inquiry extended; and that the average age at which death took place among the class ministering to health, and including physicians, surgeons, apothecaries, veterinary surgeons, midwives, and nurse-tenders, was from thirty to thirty-five in males, and fifty-five to sixty in females; the entire number of deaths being 112 males, and nineteen females.

Some explanation seems necessary to account for the interval which has been allowed to pass since these investigations were made. The results of the first investigation gave an amount considerably beyond what even we feared did exist. This was stated in our evidence before the select Committee of the House of Commons, and we determined to repeat the inquiry. The facts, therefore, which we now place before the public and the profession are the result of a double investigation.

The following extracts from our evidence in 1843, we give, not only to corroborate the above statement, but to remove any suspicion that we had taken up the subject lightly or hastily. The period which has passed, now four years, has only increased our conviction of the truth of the returns.

In answer to a question of Lord Eliot's, as to the necessity of removing medical officers from public situations, it was answered:

" 1941. It is a very delicate matter to turn an old officer out who has had an attack of paralysis, or is broken down by the hardships of the profession; and there is great difficulty in arranging matters as to the removal of an officer from infirmity. I apprehend that, the moment the board is established, there would be few appeals for even inattention; but such would happen sometimes. The greater number of incompetent persons removeable would, I think, be referable to disease, most probably acquired

in the discharge of their duties. In connexion with Dr. Stokes, I endeavoured to ascertain the mortality of the profession, but the return was so formidable, so shocking, that we were afraid to bring forward the statement we had made up, and we are trying to verify it. We were afraid to bring it forward, because the statement might be questioned.”—*Mr. Cusack’s Evidence, Parliamentary Report*, p. 160.

“ 2037. *Chairman.*] Can you state whether the salaries of the medical men in Ireland attending charitable institutions are sufficient or otherwise?—In my opinion they are not sufficient, particularly in the dispensaries; and the reason I give that opinion is, that it is a fact that in Ireland a medical officer runs a greater risk of death from contagious disease than perhaps in any country in Europe.

“ 2038. Have you taken any means to ascertain that?—Mr. Cusack and I have been during the last year engaged in an investigation upon that point, and it was our wish to have it completed so as to lay it before the Government, and also this Committee, but it has not yet been completed; but the results, as far as we have gone, shew a very appalling mortality of medical men; and I know the fact from my own personal knowledge, for such a number of my pupils have been cut off by typhus fever as to make me feel very uneasy when any of them take a dispensary office in Ireland; I look upon it almost as going into battle.

“ 2039. Is it your opinion that the fever is peculiarly fatal to the medical men in Ireland?—It is peculiarly fatal to medical men.

“ 2040. *Chairman.*] Do you attribute the great mortality of the medical men to the want of ventilation in the hovels of the poor which they visit?—Most cases of fever of the medical officers of dispensaries seem to be attributable to the medical man having to enter the miserable hovels of the people, and to expose himself to concentrated and violent contagion.”—*Dr. Stokes’ Evidence, Parliamentary Report*, pp. 166–7.

To dwell at much greater length on the facts brought for-

ward in this communication would be unnecessary, for they speak for themselves, and sooner or later must have that good result which ever follows the statement of a truth. The researches only come down to 1843, and refer to the previous quarter of a century; but it is our intention to carry them on so as to ascertain the amount of medical mortality for the last four years.

We have the authority of Inspector-General Marshall for stating, that from January, 1811, to May, 1814, a period of forty-one months, or three years and a half, sixty-six officers were killed in battle in every thousand, and thirty-seven died by disease, making 103 deaths from all causes, or about ten and a quarter per cent.; but the mortality of the medical practitioners in Ireland, during a period of twenty-five years, is twenty-four per cent., to speak in round numbers. When to those considerations we add the appalling fact, that of the deaths of the medical men in Ireland, one out of every 2.29 has occurred from fever, the danger which attends the discharge of public medical duties in this country becomes sufficiently manifest.

It is time that these circumstances, for which scarcely a parallel can be found, should be known and duly considered; and the Government, while it, on the one hand, seeks to remove the causes of the spread of fever in Ireland, should, on the other, provide that the poor and destitute man shall not receive inferior or insufficient medical assistance; and reward with no niggard hand, and encourage by every means in its power, the exertions of a class of gentlemen, we fearlessly assert, the best educated, the least prejudiced, the bravest, and the most philanthropic, in the community.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

1. *On the Preparation of Food for the Labourer.* By SIR HENRY MARSH, Bart. Dublin, M^cGlashen. 1847. pp. 10.
2. *On the comparative nutritive and pecuniary Values of various kinds of Cooked Food, and the Chemical and Physiological Laws which must be adhered to for the beneficial Use of Diet.* Read at the Agricultural Meeting of the Royal Dublin Society, on the 6th of April, 1847. By JOHN ALDRIDGE, M.D., M.R.I.A., Professor of Chemistry to the Apothecaries' Hall of Ireland, &c. pp. 20.
3. *Reports from the Central Board of Health to the Central Relief Commission of Ireland, on the Administration of Food.*

A DEEP debt of gratitude is due by the inhabitants of Ireland to the noble-hearted Americans and Englishmen who have so liberally subscribed for the relief of the starving peasantry of this country. The only way in which this debt can be repaid, is by the free expression of the sense of this obligation which is entertained by every right-minded Irishman. We feel assured that those who are readiest to proclaim their gratitude under such circumstances would be the first to reciprocate the benefit if it were necessary; and we very much doubt, whether any of the writers, whose taunts we are sorry to see occasionally in the London newspapers, have ever subscribed a shilling towards the fund which they make the subject of self-glorification. In accordance with these sentiments, we sincerely thank the benefactors of our country, for their generous assistance in her hour of trial. There are other wants in Ireland, however, besides that of raw material of food,—and other means of philanthropy besides the giving of money. The peasantry of Ireland, living hitherto on potatoes, have been ignorant of the proper mode of preparing for human use other articles

of diet; they did not experience a necessity for a knowledge of the simplest cookery. Upon the failure of the potato crop, and its attempted substitution by other kinds of food, this total ignorance presented a great difficulty; it became requisite for the authorities to make arrangements for having the food cooked for the people, who were unable to prepare it for themselves. Dispensation of cooked food, on a scale of great magnitude, thus became necessary; and scientific aid was required to construct a dietary at once economical and sufficient. These have been the circumstances which have occasioned the appearance of the documents at the head of this Article.

Doctor Aldridge's Essay is chiefly devoted to the demonstration of the principles which should govern the dietary of the human race. With this object he lays down the following laws, as those regulating the proper alimentation of a healthy man.

1st. The daily food of an adult must contain elements equal to the daily waste which he undergoes; the food of the young must contain elements equal to the waste *plus* the surplus growth; and, in both cases, these elements must be ready combined in the proportions necessary for building up the various tissues.

2nd. This food is most easily obtained by combining, in proper proportions, flesh or seeds, for the supply of the nitrogenous elements of waste, with succulent stems, roots, or leaves, for the supply of the inorganic elements of waste.

3rd. The bulk of this food should be adapted to the capacity of the digestive organs.

4th. The essential elements of food should ordinarily be administered in a form as nearly solid as is consistent with its being agreeable to the taste, leaving it to the instinct of the individual to gratify the demands of thirst.

In the examination of particular kinds of food, he finds that seeds and flesh are usually deficient in sulphur and the alkalies. Thus, in adults of ten stone weight, the loss of sulphur, *per diem*, is about twenty grains, and of potash and soda eighty-four grains. The quantity of wheaten flour requisite for supplying the waste of nitrogen and all the other elements, contains, however, but seventeen grains of sulphur, and forty-three grains of the alkalies. In a similar manner the weight of peas, in other respects sufficient for supplying the daily loss by waste, contains only eleven grains of sulphur and fifty-five of alkalies. Dr. Aldridge considers that it is this deficiency of mineral ingredients in flesh and seeds which occasions scurvy. The herbaceous parts of vegetables, on the contrary, while deficient

in nitrogen, abound in mineral elements, and thus he accounts for their prophylactic and curative influence in this disease. Again, he shews that growing animals require a much larger quantity of lime than is requisite to form bone-earth, while seeds are very deficient in this element. These are the considerations which lead him to his first and second propositions. The third proposition, the truth of which is self-evident, forbids the use of the herbaceous parts of plants as the sole material of human food. *To this the potato is an exception, containing, in a bulk not too considerable, all the necessary elements for the supply of waste.* The fourth proposition is supported by a number of facts, well known to the breeders of cattle.

We are glad to find that the Central Board of Health has largely availed itself of the views of Dr. Aldridge. We shall quote from its Second Report such extracts as appear to be of chief value, and which are nearly all contained in Dr. Aldridge's pamphlet.

“ The allowance of rice which may reasonably be made in lieu of Indian corn meal should not be less than one pound and a half of rice in lieu of one pound of Indian corn meal, where either grain is given alone; and the same proportion should be observed in a mixed ration, viz., if half a pound of Indian corn meal be given instead of the standard ration of one pound, there should be given along with it three quarters of a pound of rice to make the mixed ration equivalent to one pound of Indian corn meal; and in like manner of all other proportions in which rice and Indian corn meal mixed may form a ration.

“ It is true that rice, by steeping and boiling, may be made to furnish a larger bulk of apparently solid food than will be furnished by an equal quantity of Indian corn, and hence has probably arisen the supposition of its being more nutritious; but the bulk thus obtained is deceptive as to the quantity of nutriment afforded. Rice contains about eighty-five parts in every one hundred of starch. A given quantity of it will, by steeping and boiling, absorb a very large proportion of water, and will swell into a large and apparently firm mass; but this mass will contain a very small proportionate quantity of nutriment. A very simple experiment will satisfactorily illustrate this:—One ounce of common starch boiled in the ordinary way will form, with a pint of water, a firm mass, which, from its apparent consistency, will seem to be good, substantial food; but the bulk thus formed, it is obvious, contains very little nutriment. In like manner of rice; one pound of it may be made to form, with water, a starchy mass of five or six pounds weight; but the produce, as in the experiment of the starch, is bulk without equivalent nutriment.

“ The Board of Health, although admitting the advantage of bulk occasionally acquired in food by cooking, yet, taking into con-

sideration one of the forms of disease now prevalent in Ireland, do not recommend that rice should be used with the object of giving bulk by the absorption of watery particles; but, on the contrary, that cooked rations should be given out in as solid a form as possible, leaving it to the natural feelings of thirst to supply the quantity of fluid necessary for healthy digestion. With the object, also, of obviating the general predisposition to relaxation of the bowels, which will probably increase as the summer advances, the Board of Health recommend the addition of some of the ordinary condiments to the stirabout, of which perhaps pepper will be found the most acceptable and the cheapest.

“ A form of disease, now very prevalent among the people, resembling in many particulars sea scurvy, is connected with, or dependent on, a defective nutrition, arising, not from deficiency of quantity, but from a deficiency of quality or variety in the food. The potato, although not containing a large proportion of nutriment, is remarkable as containing within itself all the varied elements necessary for forming healthy blood; no one of the substitutes for it, with the exception of oatmeal, possesses this remarkable property; and hence the use of more than one article of food is necessary in order to secure a sufficient supply of the varied elements of nutrition, and thus to obviate the form of disease referred to.

“ With this principle in view, the Board of Health, as the season of the year now gives facilities for it, strongly recommend the admixture of onions, leeks, scallions, or shallots, in cooked meal rations, or stirabout, which will both act as condiments, and will also furnish some of the elements of nutrition essential for forming healthy blood. Onions are so rich in nutritive qualities, that, as a mere article of food, one ounce and a half may be considered as equivalent to about one ounce of meal. On every opportunity, the importance to health of using vegetables, such as carrots, parsnips, turnips, and cabbage, along with meal, should be impressed upon the people.

“ It may not, perhaps, be out of place in those observations to make the people generally acquainted with the high nutritive qualities of beans and peas, which, weight for weight, contain from ten to twelve times as much nutriment as potatoes. In those countries where rice is very extensively used as the food of the people, experience has taught them that rice by itself has low nutritive qualities, but that the deficiency can be supplied by adding about two ounces of beans, peas, or lentils, to each pound of rice. It must, however, be remembered, that with beans or peas some other vegetable food must be used, as, although possessing in a high degree some of the most important elements of nutrition, they nevertheless do not contain a sufficient variety of other nutritive elements to support the human body in health.”

Sir Henry Marsh's pamphlet is just what might be expected

from a physician of so high and deserved a reputation. It contains many valuable suggestions with respect to the best mode of cooking food, and fully bears out the principle that the solid form is the most advisable for its exhibition. This *brochure*, written before the establishment of the existing model-kitchen, contains the following passage, p. 8:

“ I wish some person practically skilled in the construction of boilers, ovens, and furnaces, would furnish a model of a soup-kitchen, cheap in material, simple in construction, and capable of effecting the double object of baking and boiling with the least possible expenditure of caloric. Most willingly would I give a prize for such a model. I think it would be a subject worthy the attention of that public-spirited and useful body, the Dublin Society.”

It is a curious coincidence that, on the very day the above was published, M. Soyer's model-kitchen was first opened for the relief of the poor; and that on the evening of that day Dr. Aldridge, in addressing the members of the Royal Dublin Society, should say:

“ In the name of the Irish people, I thank M. Soyer for what I believe to be his purely philanthropic intentions towards them. He has given to us two boons of no ordinary value,—a model dispensing kitchen of great ingenuity, and a method of economic cooking far superior to any to which the poorer order of our countrymen have hitherto been accustomed.”

We have thought it right, at the present epoch, to put on record in our pages our grateful estimation of those who, by their money or by their talents, have assisted in the relief of our suffering fellow-countrymen.

Observations on the Connexion between Famine and Fever in Ireland and elsewhere. By H. KENNEDY, M. B., &c. Dublin: Hodges and Smith, 1847. 8vo. pp. 50.

WE have perused this pamphlet, and find it to contain evidences of very considerable research. It is written in answer to Dr. Corrigan's tract on the same subject, which appeared last year, and which was reviewed in our second Number. We here quote the conclusions to which the Author has arrived.

“1. That, with our present knowledge, we are not justified in attributing other results to the use of bad or deficient food, than that, in the first instance, it injures the health, by weakening the bodily

frame ; and, if pushed further, will cause death from pure starvation.

“2. That, in the first degree, bad or deficient food predisposes to the engendering of several diseases ; fever amongst the rest.

“3. That, should fever exist, and famine with it, the latter will aggravate the former, just as a very inclement season, or want of fuel or clothing, will do.

“4. That the proper way to account for the frequent occurrence of famine and fever, at the same time, is to consider them as the offspring of one common cause.

“5. That, no other theory will account for all the facts of the case.

“6. That, the common cause, known to authors under the name of an “epidemic constitution,” is shewn usually by a general increase in sickness and mortality ; by the occurrence of epidemics amongst the lower animals ; by the destruction of vegetable life ; by a sudden increase in some of the specific contagions, as small-pox ; by marked atmospheric changes ; and, when this general cause, whatever it be, is very powerful, by the rapid decay of substances, such as silk, cotton, &c. &c.

“7. That we are still ignorant of what the permanent cause and spreading of epidemic diseases, including fevers, depends upon.”

Before quitting our notice of this *brochure*, we may mention our regret that the author should not have availed himself, to the extent which he might have done, of the sources of Irish statistical record which lay within his reach. We also strongly object to vague references to “ancient Irish annals” for authority in matters of history, whether medical or general. We have already seen to what purposes such inexact references may be turned by some of our antiquaries. This is an archæological age, and its principles should extend to medical as well as general literature.

We beg to direct the attention of those collecting materials for future essays on Irish famine to a tract which has lately issued from the London “Irish Office,” entitled “Famine in Ireland, 1840–41.”

Thoughts on the Nature and Treatment of several severe Diseases of the Human Body. By E. J. SEYMOUR, M.D., F.R.S., late Physician to St. George’s Hospital, &c., &c. Vol. I. 8vo. Longmans. 1847. pp. 260.

IN the volume before us Dr. Seymour presents to the profession the results of his extensive experience in the treatment of diseases of the stomach, gout, mental derangement, and

sciatica. If it receive a favourable reception, it is his intention to continue his "Thoughts" in one or two other volumes of a similar character.

We look upon such a book as this as a debt justly due by the senior members of the medical profession—more especially those who have enjoyed extensive practice, to their junior brethren; we are, therefore, at all times inclined to receive the payment of such debts with gratitude, and, using the hand of the gleaner, rather than the knife of the critic, to gather for our readers some of those practical hints, which are the necessary result of experience.

One fault, however, we cannot, in duty to ourselves, omit noticing,—a fault to be found in the works of most English physicians, with a few honourable exceptions,—that is, the omission of any notice of the discoveries or contributions of Irishmen to medical science. With this omission we were struck in the very first pages of Dr. Seymour's book: for, in the third page, when speaking of the exact nature of the acid in the natural condition of the stomach, he ascribes to Magendie and Berzelius the discovery of its being the lactic; and in a footnote, which he states was furnished to him by Dr. Bence Jones, physician to St. George's Hospital, this discovery is stated to have been made by Berzelius in 1830. Now, so early as the year 1824, Dr. Graves proved the identity of the acid of the human stomach and lactic acid, in a paper published by him in the fourth volume of the Transactions of the Association of the King and Queen's College of Physicians in Ireland.

In his chapter on diseases of the stomach, Dr. Seymour's "Thoughts" are directed chiefly to the treatment of pain occurring in that viscus, and of obstinate vomiting. Where pain does not depend on organic disease, and is accompanied by water-brash or palpitation, he finds that it usually yields to the regular administration of a powder consisting of six grains of rhubarb, fifteen of bicarbonate of soda, three of calumba, and two of aromatic powder, taken daily, for at least a fortnight, in a glassful of water, before dinner, or at bed-time; and where pain is the most obvious symptom, without heart-burn or vomiting, the best remedy, in his experience, is the combination of trisnitrate of bismuth with magnesia:

"But where the pain has resisted this treatment, and emaciation is very great, so as to give alarm lest there should exist organic disease, as of fungus or cancer, the best remedy is a grain of opium thrice daily, the bowels being kept open by means of injections, the food being animal principally, and in small quantity."—p. 7.

Having shortly but clearly noticed the various causes of

vomiting, and the treatment ordinarily employed to check it,—adding that, in his own experience, turpentine is the best remedy in hæmatemesis, and from half a grain to a grain of opium made into the smallest-sized pill, in long continued vomiting, where all else has failed,—the author proceeds to describe that very rare but very dangerous form of vomiting, the iliac passion, from his own successful treatment of the only three cases he ever met with. In one case, which he saw with the late Dr. Warren, the usual symptoms were present:

“On the matter vomited floated portions of fæces, so much formed as to leave no kind of doubt of their nature; and this kind of sickness rendered the patient quite miserable in addition to her other sufferings. I remained several nights in attendance, and at last succeeded in allaying the irritation in the following manner, all medicine having been vomited previously: two grains of calomel, made up with a grain of the soft and recent extract of opium (without gum) into the smallest pill possible, was given; and when the spasm or endeavour to vomit returned, the patient was obliged,—I had best say forced,—to take half a bottle of soda water in a state of active effervescence. The expansibility of the gas, and the downward impression in swallowing, had the desired effect. After three successive doses had been taken in this way no vomiting occurred, and, as far as my memory guides me, after the fourth dose a relief was obtained by ordinary efforts downwards, and no more sickness ensued.”—p. 44.

In the second chapter, after a few preliminary remarks on the different forms of gout, Dr. Seymour passes in review the many remedies that have been formerly, and are at present, employed in the treatment of this disease, commenting on each as he proceeds. We shall condense for our readers some of his judicious and highly practical observations.

The practice of applying leeches, followed by emollient fomentations, to the inflamed part in gout, so highly praised by the modern French physicians as the most certain means of alleviating the pain, our author does not approve of; for, in every case in which he has seen it tried, the attack became unusually long, though the pain was in the first instance relieved. Dr. Seymour speaks in the highest terms of colchicum :

“In gout, especially in gout originated from excess, in strong, violent, painful gout, it may be given, not only without fear, in moderation, but with almost an absolute certainty of relief, without any bad effects, either immediately or remotely following its use.”—p. 93.

The preparation he especially recommends is the wine of the root, and he dwells much on the advantage to be derived from its continuance in small doses (fifteen drops every night, for even a twelvemonth) after the immediate distress has disappeared. The ill effects which occur in many persons subsequently to the use of colchicum, and which are ascribed by some physicians to that medicine, Dr. Seymour thinks, and we fully agree with him, should be rather ascribed to the patients themselves, who, overjoyed at their easy and speedy recovery from a fit of the gout, make no kind of alteration in their mode of living, and, being usually advanced in life, of indolent habits, and luxurious livers, die of an apoplectic seizure, when, of course, the unlucky colchicum is blamed.

In the commencement of a severe attack of the gout the author, in general, prescribes twenty minims of the wine of colchicum root, with ten grains of magnesia, in ten drachms of camphor mixture, twice daily; and at night, three grains of the acetous extract with five grains of Dover's powder: and this treatment, he says, may be persevered in with good effect for several days, provided it does not produce either vomiting or active purging; if either occur, it must be immediately stopped. For a diet-drink he recommends, at the same time, a pint of the decoction of burdock root (made by boiling slowly two ounces of the sliced root, well washed, in a pint and a-half of water, down to one pint, and straining), to be taken in the course of the day and night, with or without an equal quantity of milk.

Of external applications in gout, Dr. Seymour thinks that oil-silk is the most useful; but he approves of it only in early and very acute cases, as in the less fully developed forms it is of little service; and, as life advances, he has known it often to produce mischief.

The third chapter, which contains the author's thoughts on mental derangement, we have perused with much interest. It is chiefly devoted to the consideration of the benefits which Dr. Seymour has derived from the employment of narcotics, especially the acetate of morphia, in the treatment of melancholia and of suicidal insanity. In the commencement of the chapter we find a remark which has frequently occurred to ourselves, and of the truth of which we are firmly convinced, that in the present day it has become too much the fashion to treat all sorts of madness on what is called the *moral* plan, to the total exclusion of *medical* treatment. We are glad to find this opinion now publicly promulgated by Dr. Seymour, who

for eight years filled the office of one of the Metropolitan Commissioners of Lunacy; and we anticipate that much good will result from the publication of his experience.

We have mentioned above, that the form of mania which is most relieved by the use of the acetate of morphia is melancholia, tending to suicidal madness; but insanity which arises immediately after parturition is equally amenable to similar treatment. The mode of administering the medicine we give in Dr. Seymour's own words:

“It has generally been, in mild cases, my practice to begin by a quarter of a grain every night, in solution; then, after a week, to increase this to half a grain: it has rarely in such cases been necessary to increase the dose beyond half a grain. In severe cases, I begin with half a grain, and increase it speedily to a grain; rarely, most rarely, beyond this dose. The medicine is given at bed-time, the period which is intended for sleep; but it must be repeated without the *intermission* of a single night, for several weeks in mild cases, and for, at the least, three months in the most severe ones.”—p. 159.

For fifteen years the author has employed this mode of treatment; he has seen seventy cases recover, and in only twenty has it failed, or given temporary relief; for no case is called a recovery unless two years, at least, of unabated health have elapsed since the treatment concluded. In most cases it is necessary to remove the patient from his family; but Dr. Seymour insists, as an indispensable requisite to the cure, that the patients be not left to the tender mercies of their keepers, but in every case a near relative or friend must live in the house; of course such friend need not see the invalid when it is thought to be improper.

Dr. Seymour does not appear to have employed morphia in many cases of the excited forms of insanity; at least he has not found its employment so useful as to induce him to give his experience of its efficacy in such cases. Since we first read his book we have had an opportunity of using the muriate of morphia with the most complete success in a case of mania, which was characterized by excitement,—continued laughter, shouting, singing, and some violence,—but without much aberration of intellect. This was the fifth attack which the individual had had; and in the last one he was confined for three months in a lunatic asylum. We administered the muriate of morphia, in solution, in doses of a fourth of a grain every sixth hour, using no other medicines except mild purgatives to regulate the bowels, and the patient recovered completely on the eighth day.

We have now so nearly exhausted the space allotted to us, that we are unable to notice the fourth and last chapter in this volume,—on sciatica. This we the less regret, as we wish our readers to consult Dr. Seymour's book for themselves; and we assure them that they will find there many practical hints, and many "thoughts" useful for the hour of need. We cannot take leave of our author without expressing the interest with which we look forward to the one or two other volumes he promises, and entreating him to lose as little time as possible in giving them to the profession.

Practical Observations on the Pathology and Treatment of certain Diseases of the Skin generally pronounced intractable. Illustrated by upwards of forty Cases. By THOMAS HUNT, M. R. C. S., &c. London, 1847. 8vo., pp. 156.

THE views advocated in the present volume have already formed the subject of a series of papers which appeared in the *Lancet* during the early part of the year 1846. The experience of another year having confirmed the author in his opinions, he has been induced by the suggestions of his friends to offer them to the profession in a more elaborate form, and thus to submit them to the test of more extended experiment, as well as to the ordeal of public criticism.

The diseases selected for discussion are lichen, prurigo, lepra, psoriasis, pityriasis, chronic urticaria, purpura, impetigo, ecthyma, eczema, acne, sycosis, lupus, and nævus araneus.

In grouping together these affections of the skin, some of which will be found distributed among several different orders of Willan, the author states that he has found it necessary to pay very little respect to their elementary forms, but wishes rather to direct attention chiefly to certain extraneous circumstances frequently connected with their history and development, which are liable to be overlooked, or too slightly regarded, in practice. Thus he hopes to simplify their treatment, and to rescue them from the "unfounded charge" of being "refractory," "obstinate," "notoriously rebellious to all modes of treatment," "unmanageable," "inveterate," "incurable." To the diseases above-mentioned his remarks are almost altogether confined; and of these he asserts that, "in their uncomplicated forms, they are all as amenable to enlightened medical treatment as any diseases which are generally considered curable by artificial means."

As the first step towards simplifying the subject of cuta-

neous pathology, Mr. Hunt reduces all chronic, idiopathic, and constitutional affections of the skin, to *one disease*. He says:

“Differing widely one from another in their eruptive forms, and scarcely presenting one positive, palpable, and distinctive point of resemblance to each other respectively, they may yet be regarded as *one disease*, manifested in different individuals by different kinds and degrees of cutaneous inflammation or irritation; sometimes producing no eruption at all, yet exciting an intolerable pruritus; but more generally manifested by an eruption, papular, scaly, exanthematous, vesicular, pustular, or tubercular, as the case may be; and in more rare instances exhibiting simple enlargement of vessels without inflammation, or spots of extravasation only, the texture of the vessels giving way under the morbid influence.”

What this constitutional lesion may be, which gives rise to so many different external forms of disease, Mr. Hunt is not prepared to determine. He suggests that “its seat may be in the nervous system, or it may possibly consist of some unhealthy condition of the circulating fluids, which the yet imperfect discoveries of chemistry have hitherto failed to detect.” In the concluding observations he seems inclined to favour the former opinion, and to consider “the nervous system as the *fons et origo mali*.” However difficult of decision this point may be, we cannot agree with the author that “the question is rather curious than practical.” On the contrary, we view the subject as one of great interest and importance, and one in the highest degree worthy of minute and accurate investigation, if we wish to rescue our treatment from the charge of mere empiricism.

In the diagnosis of these disorders, Mr. Hunt deems it of comparatively little consequence to what order or genus the case may be assigned. He directs his attention, in the first place, to the determination of the question, whether there be reason to suspect the existence of syphilis or not. If the eruption be of syphilitic origin, it must of course be treated with reference to that disease; if not, the next point is to ascertain whether the eruption be complicated with any other local or constitutional deviation from health, and especially whether there be a febrile condition of the system, or any indications of increased vascular action.

In the treatment the author very judiciously recommends that “every obvious local or constitutional disorder which may happen to complicate the eruption, and which in some cases originate and sustain it, must be rectified if possible.” Disordered secretions must be attended to, derangements of the

digestive organs regulated, and the general health, if it require it, restored, "before especial attention is directed to the cutaneous affection, except in those cases in which the health suffers as a result, and not as a cause of the eruption."

When symptoms of increased vascular action or febrile excitement are present, Mr. Hunt employs active antiphlogistic treatment previously to the exhibition of alteratives. In such cases we fully coincide in the opinion that depletory measures and cooling regimen are necessary; but we believe that few of our readers will be inclined to adopt, and few patients submit to, the energetic practice he insists on. He says:

"The most tormenting cases of skin disease often consist of extensive inflammatory action of an acute type, but of long duration, thus combining the acute and chronic character. We find a quick, full, hard pulse, a skin universally warmer than natural, and in the diseased portions the patient suffers extremely from sensations of burning, smarting, itching, pricking, and stinging. The blood taken from the arm will occasionally, but not always, be found both cupped and buffy. If these symptoms occur in a plethoric subject, a second or third bleeding, each one *ad deliquium*, will probably be required at intervals of a week or ten days; and leeches must be applied occasionally to the red margins of the more recently affected portions of the skin. In addition to this, it may be absolutely necessary not only to restrict the patient to a low diet, but to administer active aperients, salines, and antimonials, in doses which will not severely rack the stomach, an organ which it is important to keep in tone during the treatment of these diseases. This system must be pursued for days, weeks, *and even months*, if necessary, until the smarting and tingling has in a great degree subsided, and the cool skin, quiet pulse, and tranquil nights, suggest that the period is arrived for the commencement of the alterative treatment."

The efficacy of external applications is altogether denied by Mr. Hunt. He asserts that "there is no sort of reliance to be placed upon them," and that "they should be used with great caution." Warm or tepid baths of fresh water, he admits, often prove a source of much comfort to a patient in the febrile stage of chronic cutaneous disease; but fomentations, in his opinion, only serve to amuse the patient, whilst medicated and hot-air baths, sea-water, "the thousand-and-one ointments, lotions, and other applications," are, one and all of them, either injurious or unnecessary.

Against this sweeping condemnation of external appliances we must beg leave to enter a decided protest. The test of experience has fully convinced us that baths, when employed with judgment and perseverance, form a valuable adjunct to the constitutional treatment of chronic cutaneous diseases.

From the use of vapour-baths, especially, we have in numerous instances observed well-marked amelioration of the symptoms. The vapour of water, either alone or mildly medicated with appropriate remedies, and at a suitable temperature, soothes and allays cutaneous irritation, promotes or restores the natural secretion of the skin, and thus reduces the local inflammation as well as the general febrile excitement of the system.

Of the numerous alteratives which have been proposed for the internal treatment of cutaneous affections, the only one on which Mr. Hunt relies with confidence is arsenic, which, he affirms, "under proper regulations, acts with such uniform efficiency as to leave nothing to be desired." Arsenic has for a long period being extolled for the cure of chronic diseases of the skin, and various formulæ for its exhibition have been recommended; the deleterious effects, however, which have occasionally followed its administration, have deterred many practitioners from employing it for any length of time, even in minute doses.

The author has certainly watched the effects of this powerful remedy with extreme care, and the results of his experience form an excellent history of the phenomena to be expected under its use. The preparation which he prefers is the liquor arsenicalis, or Fowler's Solution; and the peculiarity of his mode of administering it is, that he commences with full doses, five minims three times a day, and continues it in *gradually decreasing doses*. By adopting this method, he assures us that it may, under favourable circumstances, be safely persevered in for weeks, *months*, or *years*, together, and "will be found to exercise an almost omnipotent influence over the cutaneous diseases under review."

The first evidence of the physiological action of arsenic is generally a mild degree of conjunctivitis, accompanied sometimes with slight swelling of the eye-lids: this symptom indicates that the medicine has produced its legitimate effect, which may now be kept up for a sufficient period by reduced doses.

"A full dose being first administered at regular intervals, in a few days (or possibly weeks), a pricking sensation is felt in the tarsi, and the conjunctiva becomes slightly inflamed. *At this crisis the disease is brought under arrest, and generally from this period appears to be shorn of its strength.* The return of healthy action in the cutaneous vessels often becomes visible, and is sensibly felt by the patient on the very day on which the eyes become suffused with tears. The dose may now be reduced; and in some cases a very small dose, taken with exact regularity, will suffice to keep the eyes tender and the skin healing, until at length even the disposition to disease appears to die away under the influence of the poison."

Individuals who have been subjected to large or increasing doses of arsenic, frequently feel the effects of its cumulative power on the sensorium; and are rendered, for months or years subsequently, so intolerant of this medicine as to be unable to use it even in the smallest doses :

“ A patient consults us for a disease of the skin: we administer arsenic in doses of five minims of Fowler’s Solution three times a day; and the patient complains in a day or two of nervous tremors, disturbed rest, horrible dreams, and other affections of the sensorium; and if we persevere the disease seems to evade the healing influence of the arsenic. Upon inquiry it is found that the patient has previously been taking arsenic in large or increasing doses; the system is already impregnated with the poison, and thus unfitted for its further exhibition.”

In some instances the intolerance of arsenic in the usual doses appears to exist as a natural idiosyncrasy ; this circumstance, however, Mr. Hunt has not found to prove an insuperable impediment to its exhibition; exceedingly small doses sufficing, in such cases, “ to control diseased action after it has been once arrested by a competent dose at the commencement.” In illustration he relates the case of a lady who had been a valetudinarian for twenty years, and who had always been unusually susceptible of the action of mineral substances, in whom a *fourth part of a minim* of Fowler’s Solution (one 1-480th of a grain of white oxide of arsenic) taken three times a day for a month, effected the permanent cure of *lepra alphoides*.

Another peculiarity in the effects of arsenic, which the author has frequently observed in persons of fair complexion or delicate skin, and which, he states, has been hitherto unnoticed by writers on this subject, is this :

“ That, whereas conjunctivitis is a primary effect of small doses of arsenic, it has also after a time a secondary effect. The trunk of the patient first, and subsequently all those parts of the body which are by the dress protected from the access of light and air, become covered with a dirt-brown, dingy, unwashed appearance, which, under a lens, reveals a delicate desquamation of the dermis, and is, in fact, a faint form of pityriasis. This may be considered as a secondary form of arsenicalization; for I have observed that, when the primary dose is diminished on the appearance of conjunctivitis, the eye-lids may be allowed to get well, yet, if the patient’s skin be kept *brown*, the disease will vanish just as rapidly as though the conjunctivæ were kept sore.”

The second section of the work consists of cases exhibiting the result of Mr. Hunt’s method of administering arsenic in diseases of the skin. In these reports much useful information

will be found, though their most striking characteristics are confidence and determination on the part of the practitioner, only equalled by compliance and enduring perseverance on the part of the patient. In the remarks appended to some of the cases, as well as in many other parts of the work, we are sorry to observe an unpleasant tone of egotism, and a disposition to disparage the views of all other writers on cutaneous diseases, which is quite unnecessary for the establishment of truth.

The third section comprises general observations on the preceding cases; and the fourth, which concludes the volume, is devoted to the question, "are local diseases ever salutary to the system at large, and are there any cases which cannot be cured without risking the general health"? Mr. Hunt's opinion is:

"That the fear of the metastasis of local disease, under enlightened treatment, if not a mere bugbear, has certainly little foundation in fact; and that, in the rare cases where such a tendency may be supposed to exist, it may be counteracted by watchful and judicious management."

Mr. Hunt's work is purely practical; he proposes no theory. He asserts, and evidently believes, that, after due preparation, and with proper management, arsenic is capable of curing permanently all chronic diseases of the skin; and, to convince his readers, he has collected with care, and enforced with enthusiasm, every fact and argument that could be made available to the support of his favourite principle. As a treatise on the administration and effects of arsenic in the treatment of cutaneous diseases, this work is worthy of attentive perusal.

Disinfecting Fluid. Copy of Reports of Dr. Southwood Smith, Mr. Grainger, and Mr. Toynbee, and Physicians, Surgeons, and others, at Dublin. Supplement, &c. Ordered by the House of Commons to be printed. July, 1847. pp. 46.

THE public mind of England is diseased: manifestly, there must be an unhealthiness in that state of national opinion which can afford nourishment to every species of quackery and humbug. When we see fungi abounding on a plant, or parasites preying on an animal, we are led to assume the operation of some cause leading to decay and rottenness; and we are justified in coming to a similar conclusion when we behold such creatures as the Morrisons and Holloways batten on the credulity of a nation. Perhaps the reason of this diseased con-

dition of public opinion may not be difficult to ascertain: we think that it proceeds from the effects which the mighty achievements of some individual Englishmen have produced upon the uninformed minds of the masses. Were we to take this Report as a specimen, we would say that the English, as a nation, were remarkable for their ignorance; and that, when compared with the French, Germans, Danes, or Swedes, their want of education stood out in strong relief. The nobility, gentry, and clergy have, it is true, learned a smattering of the classics; the middle classes have a mechanics'-institute-and-lecture-room acquaintance with the odds and ends of science; but no voluminous monograph or systematic treatise, such as we see constantly emanating from the French and German presses, could find a sale in England; manuals constitute the staple of her present literature. Such, generally speaking, is the state and means of mental culture in England; and yet Englishmen have wrought the most astonishing combinations of modern times: in England the steam engine first put into play its giant powers; in England gas was for the first time conveyed through miles of streets to illuminate her cities; England led the way in that mighty revolution in the social condition of the human family which is operating through the means of railways. Looking at these great works, without being in a condition to comprehend the steps which led to their establishment, the effect has been similar to that which might be produced by magic, on the public mind of England. It has been said, that wonder is the effect of novelty upon ignorance: and there being presented on every hand monuments of the triumphant efforts of intellect and genius, the astonished and ignorant stand agape, and are ready to receive the advances of every charlatan who promises a new wonder. Such, it appears to us, is the explanation of the extraordinary gullibility daily manifested by the British people, a gullibility of which there is a numerous tribe of native and foreign knaves always ready to take advantage.

We have been led to these reflections by a perusal of the document, the title of which is given at the heading of this article. This paper, which is published by order of the House of Commons, and at the national expense, in this year of great monetary depression, purports to contain copies "of any letters or reports received by the Chief Commissioners of Woods and Forests, from *Manchester, Liverpool, and Ireland*, on the Efficacy of Monsieur Ledoyen's Disinfecting Fluid." It opens with a letter to Lord Morpeth, signed by "Ledoyen," and "A. C. Calvert," calling his Lordship's attention to "a statement of the different objects to which M. Ledoyen's pro-

cess can be applied with success;" moreover, professing that the writers "have no sordid views;" that they "wish to avoid, if possible, being forced to form a company, and make it the traffic of speculators;" and ending with a "hope to find in your Lordship that which your Lordship is so well known to possess, benevolence and charity to all men." Then comes the "statement," in which it is said that "M. Ledoyen, chemist of Paris, and Mr. F. C. Calvert, professor of chemistry, late of the Garden of Plants at Paris, and pupil eight years of Monsieur Chevereul, at present lecturer at the Royal Institution, &c., at Manchester, have discovered the means of disinfecting all foetid animal substances and gases by a liquid which is very cheap, simple, and can be applied by any person with the greatest facility. It disinfects night-soil, not destroying, but increasing vegetation, more particularly as regards agriculture, completely preventing the disease in potatoes, when the land is manured with disinfected night-soil. It disinfects hospital-wards of miasma; also cellars, water-closets, and buildings infected by impure gases. It disinfects sailors suffering from fever on board of vessels; it will also disinfect ships at sea, and under quarantine. It disinfects patients suffering with infectious disorders and wounds, also dead bodies, so that they may be kept nearly a month; also different parts of the body can be kept for the purposes of dissection, for coroners' inquests, &c."

It may easily be imagined the delight which this communication must have produced in the bosom of the First Commissioner of Woods and Forests; it was a mare's-nest of the greatest promise; it offered a panacea for all the ills that burden her gracious Majesty's advisers. Are the potatoes threatened,—here is a prophylactic; does fever rage throughout the land,—here is a magic scarf which, moistened with "the liquid," and waved through the wards of an hospital, immediately cures all the patients; are the higher classes fearful of impending contagion, vases of "the liquid," rose-scented, and distributed through the apartments, will, by their protective influence, dispel every uneasiness; is a Health-of-Towns Association tormenting the First Commissioner, what an agreeable means of propitiating its members, growling at the postponement of their bill, will be the present of a liquid, cheap, simple, and easily applied, which is capable of removing every odour, no matter how unpleasant. No fear of another Boa Vista catastrophe; the decks need only be washed with a few gallons of "the liquid," and infection becomes impossible. We declare that we do not in the slightest degree exaggerate the promises which

Messrs. Calvert and Ledoyen hold forth. They say that their discovery is capable of preventing the potato disease, curing fever, destroying contagion, and removing all disagreeable odours. Is it any marvel that Lord Morpeth should direct his secretary to acquaint Colonel Calvert that he had—

“Prevailed upon Dr. Southwood Smith, Mr. Toynbee, and Mr. Grainger, to witness and test any experiments which he may submit to them, having for their object the disinfection of dead bodies, ulcers,” &c.

Yet, Lord Morpeth ought to have hesitated before he gave the sanction of his name to an investigation of professions so profuse: although his Lordship, in common with his order, is probably not very profound in chemistry and physiology, he ought at least to be acquainted with the English language. We suppose he knows the meaning of “infection;” and he should have seen some inconsistency and confusion in the language which spoke, in the same breath, of “disinfecting” a water-closet and a fever patient; of preserving potatoes from the rot, and pickling subjects for dissection.

However that may be, we are next presented with the “Report on M. Ledoyen’s Disinfecting Fluid. To the Right Hon. Lord Morpeth, First Commissioner of Her Majesty’s Woods and Forests, &c. By Dr. Southwood Smith, D.R. Grainger, and Joseph Toynbee, Esqrs.” According to this Report,

“This fluid does not possess any peculiar power in preserving the dead body from decomposition, and that, therefore, it is not applicable, to any considerable extent, to purposes of dissection: it removes the fœtor of putrefying substances, vegetable and animal, by decomposing the sulphuretted hydrogen upon which that fœtor chiefly depends.”

It appears, moreover, from this Report, that this substance converts the volatile ammonia, generated in putrefaction, into a fixed salt, useful in agriculture; but there is at the same time formed a metallic compound, the effect of which on vegetation is confessedly unknown to the Commissioners.

Among the scientific experiments upon which the Commissioners arrived at these results, we beg to introduce one as a specimen:

“We have had an opportunity of trying the effect of this fluid in a sick chamber in a private family. A small quantity was put into a close-stool before the invalid used it. Upon uncovering and emptying the stool only a very slight smell could be perceived in

the room, although, on a previous occasion, when the stool was used without the fluid, the stool was extremely offensive."

We again read, that by saturating the bed-clothes with the so-called disinfecting fluid, the laundresses and other persons engaged in the cleansing of such, are, in the opinions of the Commissioners, most probably protected, "and prevented from receiving a shock which is never recovered, even when death is not the immediate result of the attack." But how many cases of painters' cholic and paralysis would follow, the Commissioners have not offered a conjecture upon^(a).

At page 12 we meet with an omission which certainly appears to us extraordinary in a parliamentary document, and has a savour of quackery, which even a "disinfecting fluid" would not remove. The passage we allude to runs thus:

"M. Ledoyen's disinfecting fluid consists of _____; the action of this preparation is to decompose sulphuretted hydrogen, &c.

Who directed this omission?—the reporters or Messrs. Calvert and Ledoyen; the printer's devil, or the Viscount Morpeth. So much for the facts arrived at in the Report before us. Let us now see what substances are capable of destroying the odour of sulphuretted hydrogen, and forming a fixed salt with ammonia. We shall give a list of many such:

Sulphate of copper.	Nitrate of silver.
Nitrate of copper.	Chloride of gold.
Chloride of copper.	Protochloride of tin.
Super-nitrate of bismuth.	Perchloride of tin.
Nitrate of lead.	Nitrate of mercury.

We can assure Lord Morpeth that a solution of any one of the foregoing salts will produce the effects attributed in the Report to M. Ledoyen's disinfecting fluid; they will be found all equally effectual; and it therefore comes to be a mere pecuniary question which of them ought to be preferred. It is plain that, however wonderful the disinfecting nostrum may be to the inhabitants of Cockaigne, it is really no secret to the scientific world.

There is not a word of evidence in the document before us as to the influence of this solution of nitrate of lead in curing,

(a) This fluid has been examined by Dr. Aldridge, and found to be a solution of nitrate of lead. Sir W. Burnett has introduced the chloride of zinc for similar purposes in the navy.

or "disinfecting," as they call it, by its vicinity, fever or other infectious diseases. Of course, no professional man (except Dr. Southwood Smith) could bring himself to support such an absurdity as that would amount to. With respect to the potato disease, Dr. Smith has been even less guarded. He manured portions of his garden with his disinfected night-soil, and finds that potatoes grown on these spots are finer than elsewhere. He says: "I have this day had specimens of them examined by Mr. Alfred Smee, who pronounces them to be at present perfectly healthy." What! not a single *aphis vastator*! Oh, genius of humbug! how numerous are thy votaries. Truly, successful speculation constitutes the idolatry of this age, and the wonder-workings of pseudo-science its superstition.

Before we conclude this article we have a few plain words to say, and we will speak the more plainly, because it is evident that the upper and middle classes are extremely ignorant of all that relates to life and health. Well, then, in the first place, a disagreeable odour does not constitute infection, although a stink may, under certain circumstances, afford a valuable index to infection; thus, in the wards of an hospital, if the medical attendant has his sense of smell unpleasantly assailed, it is a signal that ventilation has not been sufficiently attended to, and he can, accordingly, order this neglect to be remedied; but if the caretakers of the ward have at their disposal an agent for conquering this stink,—a liquid, which, upon being poured into the chamber-vessels, or sprinkled on the ward, will remove all unpleasant effluvia,—then the safeguard afforded by the senses becomes nugatory: the unpleasant odour is removed, but the contagious poison continues and accumulates. It is like taking away the beacon, while the rock remains. Such a substance may lessen the trouble of the night-men and wardsmen, and dissecting-room porters, whose eulogistic testimony to the value of M. Ledoyen's fluid, is published by the House of Commons in the paper before us, but we feel persuaded that its employment would prove very injurious in practice.

We have another observation to make, and that in a very serious spirit. The facts are these: the originators of this *imposture*, we can give it no other name, came over to Dublin avowedly under the patronage of Her Majesty's Government; they sent round a circular to officers of the municipality, professional men, &c.; they asked for inquiry: this was responded to. They were treated with hospitality, became intimate in families, were furnished with testimonials by some few, and subsequently

corresponded with by others with whom they had formed acquaintance. What will it be thought of by our readers, when they are told that these private letters, containing domestic details in some instances, remarks on friends which would not bear to be repeated in others, are published in this paper ordered to be printed by the House of Commons. We could not expect better from a vulgar cockney; but, certainly, we think that Her Majesty's Government should not present, nor the House of Commons order to be printed, documents of such a nature, without suitable supervision. From a dislike to becoming the medium for propagating petty scandal, we refrain from quoting portions of this Report which fully bear out our assertion.

We have had occasion in this article to blame various parties, but are anxious that we should not be misunderstood. We think Lord Morpeth has acted without consideration in this transaction, but we do not, on that account, forget his noble nature, or the services which he has rendered to our country. Dr. Southwood Smith we believe to be sincere and well-meaning, although rather crotchety, and somewhat enthusiastic.

Let us now briefly pass in review some of the evidence detailed in this precious document—some of the “Letters and Reports received by the Chief Commissioner of Woods and Forests,”—set forward in a parliamentary folio, gravely ordered to be printed by the British senate, and, consequently, paid for by the country. Always premising that we do not deny to this, in common with many other chemical substances, the power of destroying some unpleasant odours, or, to deal more in the phraseology of the Report, *stinks*. But against the disgraceful quackery with which this book abounds,—a quackery not equalled by the most offensive and indecent advertisement,—and the humbug of presenting such a book to the country, we loudly and strongly protest. Let it be remembered, moreover, by every Irish practitioner, who risks, and has for years risked his life, and devoted his time, talents, knowledge, and energies to his country's service, that, while his just and respectful *claim* has been scouted by the authorities, these adventurers have been patronized and fostered, introduced and lauded, and their productions printed and paid for out of the public purse!

We have already alluded to the circumstance that this imposture has been attempted to be bolstered up by the testimony of night-men, dissecting-room porters, ward-men, and other respectable authorities of a similar kind. Some of the experiments made by these intellectual and educated individuals may amuse

our readers, as they have doubtless enlightened the House of Commons. Speaking of the contents of a privy :

“ William Fenwick did, as you gentlemen saw, *taste* it, and William Dyer put some over his eyes without injuring them: if it had not gone through your process, it would have *blinded* him!!”

We cannot, however, pursue a strain of levity when we come to examine the part which a physician of repute in London has taken in this transaction. Dr. Southwood Smith, not content with bearing his share in the fooleries of the Report already spoken of, volunteers his individual testimony as to the efficacy of this fluid in obviating contagion among the medical and non-medical attendants on the sick :

“ Whatever difficulties,” he writes, “ your Lordship may have encountered in obtaining the necessary powers to make even any commencement of a system of prevention by the removal of the causes of fever, you have in your own hands, and have had for some months, the sure and certain means of preventing the extension of fever to the immediate attendants on the sick.”

And again :

“ That, by means of this agent, medical men, who are always in imminent danger, and who so often suffer, might perform their arduous duties with perfect security.”

Can it be believed that a nobleman of such acknowledged philanthropy can be, in common with a member of the Royal College of Physicians, in possession of a secret which, if made known, would now stay the pestilence in our land, and that they churlishly withhold it! Will they not afford one drop of this healing liquid to the poor Irish physician?

In the columns of newspapers, in the pages of journals, on the covers of magazines, in the corners of railway guides, placarded on dead walls and bankrupts' shop-windows, dropped into the hat at public meetings, thrust into the hand in streets, and forced upon the attention at every turn, we thought all the modes of puffing quack advertisements, and indecent labels, either in prose or rhyme, had been exhausted. But we find that we were mistaken. A novelty in this department has been introduced by Colonel Calvert; and in the pages of a parliamentary report we see puffs as gross, and language as indelicate, as any that disfigure the lowest newspapers. Let us take a few examples :

PARLIAMENTARY REPORT.

“ Mr. Sankey, the resident medical officer of the Fever Hospital, will feel obliged by Mr. Davis sending five gallons of M. Ledoyen's disinfecting liquid.”

“ Will you have the goodness to send to Mr. Davis, at Colonel Calvert's, Deptford, as we have, unfortunately, lost the address, for five gallons of your disinfecting liquid, for the use of the hospital.

“ I have, &c.

“(Signed) F. BURTON, M.D.

“ *To M. Ledoyen.*”

“ We, the workmen employed by Mr. Radford, nightman, to empty a cesspool of night soil yesterday, at Mr. Eldertons, Brixton, feel it our duty to return you our thanks for your kindness to us, and to express our astonishment at the discovery of the French gentleman. We beg you to accept our best wishes, and may you long live to do good.

(Signed),

“ W. FENWICK.

“ JOHN DOBSON,

“ CHARLES COOKE.

“ WILLIAM DYER.”

“ SIR,—I, Daniel Kearney, attendant of the foul dysentery ward in North Dublin Workhouse Union, declare that, before you came, the stench of the ward was so intolerable that I could scarcely remain in it for a few minutes; but that since you and the French gentleman gave us

QUACK ADVERTISEMENTS.

“ I wish to have another box and a pot of the ointment, in case any of my family should require either.

(Signed) “ ALDBOROUGH.

“ *To Professor Holloway.*”

“ SIR,—Send me a 4s. 4d. canister of your snuff, called ‘Grimstone's Eye Snuff;’ let it be the same sort which Lord Liverpool received from your house in the Strand.

“ Your obedient Servant,

“ G. CANNING.

“ *To Mr. Grimstone.*”

“ When I commenced the use of your pills I was in a most wretched condition; and, to my great delight, in a few days afterwards, there was a considerable change for the better, and by continuing to use them for some weeks I have been perfectly restored to health, to the surprise of all who have witnessed the state to which I had been reduced by the disordered state of the liver and stomach. Would to God that every poor sufferer would avail himself of the same astonishing remedy.

(Signed)

“ CHARLES WILSON.”

“ He had severe hectic fever, the urine depositing large quantities of sediment; constant, distressing cough; no appetite, and the stomach rejecting nearly everything he took, both food and medicine. He began by taking five of your pills night and morning, which were gradu-

your liquid the ward has been completely free from stench; that myself and the patients are much healthier, and there have been no deaths in the ward; and that the air of the ward is now pure and clean.

(Signed),

“ DANIEL KEARNEY.

“ *Colonel Calvert.*”

“ *Madam Steevens’s Hospital,*
“ *Dublin.*

“ SIR,—In compliance with your desire, I have the honour to address you, and feel much pleasure in acquainting you that the patient, M’Dermott, No. 11 ward, is able to be out of bed for the last few days, which I am of opinion is owing chiefly to your instrumentality, as without the application of your invaluable discovery it would not have been in my power to pay that attention which has conduced to his present improved condition; of his ultimate recovery I make no doubt whatever. The discovery will, no doubt, be estimated by society.

“ Certified this 15th June, 1847, by me.

“ (Signed), DANIEL O’BRIEN(*b*).

“ *Colonel Calvert.*”

We think it right to put our readers in possession of the mode in which some of the testimonials printed by order of the House of Commons have been obtained, and, at the same time, acquaint our readers with some of Colonel Calvert’s proceedings in Dublin. Colonel Calvert states that he received certificates from “ Sir William Crampton, Bart., physician; Mr. Carmichael, surgeon; Dr. Frederick Kirkpatrick, M. D., physician to the North Union Workhouse,—and George Brown,

ally increased to ten, which in a short time had the effect of completely curing the cough, the stomach affections, and restoring the urine to its natural state. His strength and flesh are also restored, and his appetite keen and digestion good.

(Signed),

“ ROBERT CALVERT.”

“ (*From the Right Hon. Lord Elphinstone.*)

“ Mr. Eisenberg having asked me for a certificate, after six months’ experience of his skill, I have no hesitation in giving it, his treatment having been perfectly successful.

“ ELPHINSTONE.”

(*a*) Daniel O’Brien is a nurse or ward-man in Dr. Steevens’ Hospital. Why did not the medical attendants of the hospital sign the document?

resident apothecary; Sir Henry Marsh, Bart., physician,—and Mr. Cusack, surgeon; and Charles Fleming, M. D.” With even the names of some of the foregoing we are not acquainted.

Besides the experiments performed in presence of the surgeons and physicians of hospitals, several of whom refused to bear testimony to the efficacy of his fluid, or to sign the documents laudatory of it placed before them, the gallant Colonel availed himself largely of the extensive experience and profound medical knowledge of the nurses in hospitals, and the pauper patients in Union Workhouses, who supplied him with their testimonials, in return for—————

—————(a), in addition to sundry complimentary communications. Daniel Kearney, whose testimonial we have already quoted, is a pauper in the North Union Workhouse, where he holds the situation of ward-man. Without the knowledge of any of the officers of the institution, Colonel Calvert and his secretary procured from this man the document referred to, in which Kearney states that, previous to the use of the disinfecting liquid, he could scarcely remain in the ward for a few minutes, although the fact is, he had actually slept in it for months previously. Daniel Kearney is, however, communicative; and the Colonel wishes, it would appear, to cultivate his acquaintance, as we learn from the following document, addressed to him by the Colonel after his departure from Ireland. In a matter of this kind no apology is necessary for its insertion. We procured it by the same means, we dare say, that Colonel Calvert obtained its answer, and the certificate.

20th June, 1847.

“KEARNEY,—I have been anxiously waiting, expecting a letter from you every day, letting me know how your sick men go on, and if my old friend Keough (I do not know how to spell his name) is getting better. Does he take his snuff? Are the young men out of the ward? Let me know all about it. *Do you make use of the liquid?* Is the ward quite clean, and clear of smell? Remember me to my old friend, and all the others. Ask the old man if he is nearly ready to dance the jig, as I intend coming to Ireland on purpose. I render you great justice that nobody can be more attentive, and do more justice to the sick, than you do; and if the liquid did any good, it was owing to your always taking care to keep it constantly used, and I attribute all the success of it to you. I shall be at all times willing and wishing to do you any good I can. Write a certi-

(a) Our readers will perceive, at p. 165, that we have parliamentary precedent for this blank.

ificate of the health of the men since I left; and *write me two or three lines, on another piece of paper, letting me know how you all are(a).*

“ Believe me your well-wisher,

“ A. C. CALVERT.

“ *Dover, Kent, England.*”

The reply to the foregoing is too absurd to occupy our pages with.

There are but few other circumstances with which we shall weary our readers. Colonel Calvert has communicated with the Marquis of Downshire, and after what fashion we may glean from the following extracts contained in a letter from that nobleman to him, dated the 22nd of June last:

“ I sent your message to him as you gave it to me, coupling Lord Morpeth’s permission with your own, in which you kindly said you would be happy to give some of the stuff for the benefit of the poor sick people in Belfast. I now write to you to ask you to be so kind as to send some by as early a period as you conveniently can, and to write your own directions for its use, and *your own change of diet*, which appears to have so wonderfully brought round the sick under your charge in Dublin and Drogheda.”

What was the nature of the dietary alluded to in the foregoing paragraph? Who placed the sick in Dublin or Drogheda under the charge of Colonel Calvert?

Colonel Calvert has brought forward certain letters from a few medical men in Dublin, commendatory of M. Ledoyen’s fluid. We are in a condition to assert that some of these letters were written by himself, and proffered to the medical officers of charities, some of whom signed them, and others refused. We now ask why letters written in a less laudatory strain than those contained in the document before us were not inserted: why was not the following letter, written by Dr. Monahan, a colleague of Dr. Kirkpatrick’s, and *received* by Colonel Calvert, and which we have Dr. Monahan’s permission to insert, published, as well as those of other officers of the same institution?

“ 71, Marlborough-street, June 4, 1847.

“ SIR,—I beg leave to say, that the fluid invented by Monsieur Ledoyen has certainly the property of modifying nauseous odours, but am not at present prepared to say that it is superior to several other chemical compounds recommended for that purpose. I shall test the qualities of all such compounds, and give you the result of

(b) The only liberties we have taken with this letter refer to the punctuation, and the use of italics in the last sentence.

my experiments in the course of twenty or thirty days, by your favouring me with your address.

“ I have the honour to be, your obedient Servant,

“ THOMAS LEWIS MONAHAN,

“ *Physician to the North Dublin Union.*”

Besides the private letter of Daniel Kearney, given in page 44 of the Report, other communications, of an entirely private nature, not intended by their authors, we are warranted in stating, to be made public, are, as we have already stated, printed by order of the House of Commons;—for example, that of Dr. Kirkpatrick, of the 14th of June, and that of Dr. Eades, of the 23rd. A few specimens of domestic history and private feeling from these will suffice to shew their character:

“ In your own ward all the poor fellows remain as you left them: your old friend, Keough, is alive and gaining ground, though he misses your cheering countenance; I do not, however, let him want a pinch to comfort his nose with. The country looks beautiful, and the prospect of a plentiful harvest most cheering; the prices, however, still keep up, and there is a continuance of fever. I have attended myself 350 cases of typhus in the last three months; an occupation I would gladly exchange for that of budding roses in your good company in Normandy. Have you a vacancy for an assistant gardener at present?”

And, again:

“ Matters go on in our hospitals as of old, the only change in our inquiries being an occasional question as to ‘ what has become of the disinfecting fluid; has it died a natural death; and what in the world could a colonel have to do with it? or we enjoy a laugh as we retail one of your merry jeu de mots.’

“ I am struggling on as usual; up every morning at five, and in Dawson-street with my class at six; *pour reussir, il faut travailler.*”

Not certain of the effect which the Report might produce, Messrs. Calvert and Co. have induced the Government to publish a Supplement, consisting of letters from Mr. Carmichael and Dr. Macdonnell of Dublin, on the “*anti-bromic*” virtues of the disinfecting fluid, and also a letter from Colonel Calvert to the Secretary of State for the Home Department, in which he states that Mr. Phillips has communicated to him Sir G. Grey’s “satisfaction on reading the various papers which have been presented by Her Majesty’s command, and ordered to be printed by order of the House of Commons.”

We have now finished our disgusting task. We hope it will never again be our duty to hold up to public reprobation another such example of ignorance and quackery patronized by power.

The Physiological Anatomy and Physiology of Man. By R. B. TODD, M.D., and W. BOWMAN, F.R.S. Part III. London, Parker. 1847. 8vo.

THE third part of Todd and Bowman's "Physiological Anatomy of Man" fully maintains the high character earned by the early Numbers of this valuable work.

In the present Part some of the most difficult subjects in anatomy and physiology are handled in the most masterly manner. Its authors have stated that this work was intended "for the use of the student and practitioner in medicine and surgery;" and we can recommend it to both, confident that it is the most perfect work of its kind, containing much original matter, and also furnishing the reader with the actual state of the science of physiology at the present day, enlarged and enriched as it has been of late years by the labours of Müller, Wagner, Marshall Hall, Carpenter, Volkmann, and others.

The peculiar excellence of this work seems to consist in the completeness of its several departments, and in proof of this we may appeal to the present Part, where, amongst other subjects, the anatomy of the organs of sense is described with a fidelity and plainness only equalled by the complete, yet concise account of their functions. It would be premature to enter at length into a consideration of the subjects treated of in a work only in part published.

The contents of Part III. are:

The Anatomy of the Organs, and Physiology of the Senses of Smell, Vision, and Hearing; then follows the physiological anatomy of the Encephalic Nerves, exclusively motor, of the compound Encephalic Nerves; of the Sympathetic Nerve; and lastly the subject of the Physiology of Digestion is entered on. We have also to remark, that a profusion of woodcuts, of great beauty of execution, illustrate every portion of the work. The anatomy of the eye-ball is described with the greatest perspicuity; we find in it several details which to many of our readers will seem novel; as, for example, the connexion existing between the iris and cornea; the existence in the *human* subject of a ciliary muscle; the mode of connexion, "*by a transparent layer of cells,*" of the retina with the hyaloid membrane, and of the lens with its capsule.

The cornea is first described as consisting of five coats or layers. These are, from before backwards:

1. The conjunctival layer of epithelium; 2. The anterior elastic lamina; 3. The cornea proper; 4. The posterior elastic

lamina; 5. The epithelium of the aqueous humour, or posterior epithelium.

The posterior elastic lamina has been long known as a separate element in the structure of the cornea; but we know of no anatomist who has described the *anterior* elastic layer spoken of by our authors, and described thus:

“This” (the anterior elastic lamina) “is a transparent homogeneous lamina, co-extensive with the front of the cornea, and forming the anterior boundary of the cornea proper. It is a peculiar tissue, the office of which seems to be that of maintaining the exact curvature of the front of the cornea. . . . The anterior elastic lamina sustains the conjunctival epithelium which covers the cornea, and is very probably the representative of the basement membrane of the mucous system, as it occupies the corresponding position in regard to the epithelium. Its thickness is about $\frac{1}{2000}$ of an inch.”

The connexion of the iris with the cornea is subsequently described. We may observe, that for some time we have been aware that such a relation existed between these two structures (although hitherto not described), and we have often seen it, and exhibited to others. Of its exact nature, however, we were ignorant until we met with it in the work of Messrs. Todd and Bowman. The following is their description of it:

“The iris forms a vertical curtain stretched in the aqueous humour before the lens, and perforated for the transmission of light. It is attached all round at the junction of the sclerotic and the cornea, *so near indeed to the latter* that its anterior surface becomes continuous in the following manner with the posterior elastic lamina: this lamina, near its border, begins to send off from its anterior surface, or that towards the laminated cornea, a net-work of elastic fibres, which stretch towards the border, becoming thicker as they advance, until at length the entire thickness of the lamina is expended by being converted into them. These fibres then bend *backwards from the whole circumference of the cornea to the circumference of the front of the iris*, and are there implanted, passing in this course across the rim of the anterior chamber and through the aqueous humour.”

The existence of the ciliary muscle in man (it has been shewn to exist in birds by Sir Philip Crampton) must be regarded as an important discovery, bearing as it does so directly on that *vexata questio*, the means by which the optical mechanism of the eye is adapted to distinct vision at varying distances. The description of this structure is well worthy of attention.

The anatomy of the internal ear has hitherto engaged but

little *general* attention. Students have been accustomed to regard as hopeless any attempt to understand the intricacies of an organ, the compartments of which are so mysteriously named, and the uses of which individually, are so little understood. The paucity of treatises in the English language on the subject has long been an almost sufficient excuse for such ignorance, but no student, with Todd and Bowman's *Physiological Anatomy* before him, can any longer use this plea. In this work the anatomy of this most exquisite fabric is described with admirable plainness, and so abundantly illustrated as to remove every difficulty from the subject.

We have only space to notice the discovery by the authors of the cochlearis muscle, an announcement which is made with the most commendable modesty. The following is the account of this newly discovered structure :

“ *Of the Cochlearis Muscle.*—At its outer or convex margin, the membranous zone is connected to the outer wall by a semi-transparent structure. This glutinous-looking tissue was observed by Breschet, and is indeed obvious on opening the cochlea, but we are not aware of any one having hinted at what we regard to be its real nature.”

That an analogy exists between this structure and the ciliary muscle of the eye, will at once suggest itself to the reader, and accordingly we find that, like it, this cochlear muscle is a mass “evidently fibrous, loaded with nuclei, and filled with capillaries, following the direction of its fibres.” In fact its fibres are of the unstriped kind. The action of this muscle “must be that of making tense the membranous portion of the lamina spiralis, and so, perhaps, of adjusting it to the modifications of sound.” This is an interesting addition to the many analogies which have been drawn between the eye and the ear, and particularly dwelt on by Breschet and Wharton Jones, who have shewn how the perilymph may be compared to the aqueous and the endolymph to the vitreous humours; the spiral lamina of the cochlea to the iris; the helicotrema to the pupil; the osseous labyrinth to the sclerotic, &c., &c. To these may now be added the resemblance already alluded to, between the cochlearis muscle of Todd and Bowman, and the ciliary muscle of Porterfield and Mr. Clay Wallace.

We cannot conclude without strongly recommending the present work to all classes of our readers, recognising talent and depth of research in every page, and believing, as we do, that the diffusion of such knowledge will certainly tend to elevate the sciences of medicine and surgery.

Lectures on some of the more important Points in Surgery. By
G. J. GUTHRIE, F. R. S. London, Churchill. 1847.

PART I.—*On Wounds and Injuries of Arteries of the Human Body, with the Treatment and Operations required for their Cure.* pp. 97.

PART II.—*On Wounds and Injuries of the Abdomen and the Pelvis.* pp. 73.

THESE lectures contain a confirmation of the doctrines published by Mr. Guthrie in 1830, by the addition of such facts as have since occurred in his own practice or that of others; and after a very careful perusal we feel bound to state that we consider them most valuable, and likely to be of the greatest service to the young surgeon in fixing on a firm basis his practice, when the urgency of the cases (wounds of large arteries) leaves him no time for hesitation.

Mr. Guthrie believes that the vast experience which surgeons acquired during the last war, in wounds of arteries, of the chest, abdomen, &c., had a considerable influence in modifying some, and changing other of the opinions which prevailed; and consequently in producing a revolution in the treatment of these important injuries. The civil surgeon, even when attached to a large hospital, certainly meets with such cases so comparatively rarely, and at such long intervals, that it is hard for him, from his limited field, to reap such a harvest of facts as would enable him to arrive at well-founded opinions, and he can never compete with the army surgeon, whose large number of cases of severe injuries, accumulated together at the same time, enables him to form conclusions from extended observation and comparison. It is with such qualifications that Mr. Guthrie presents his opinions and well-matured experience on some of the most important points in surgery.

He is somewhat peculiar in his views of the means nature employs in stopping bleeding from a divided artery of moderate dimensions, attributing less to the retraction of the artery within its sheath, the effusion and coagulation of the blood in it, and the formation of a clot in the end of the vessel, and more to the contraction of the very end of the artery itself. Both the cases, however, that he gives, are wounds of that class in which one would expect this contraction to be greatest and most likely to be met with: the first, where the arm was carried away by the bursting of a shell; the second, where a cannon shot took the leg off. The arteries must have been

stretched to the utmost before giving way, and would, therefore, present the utmost degree of contraction, very different, we would say, from the extremity of a clean cut vessel, where we should not like to trust much the arrest of the hæmorrhage to the contraction of the end of the artery alone.

When an artery is cut across, the upper end contracts considerably, and after a time a pyramidal clot closes the end of the vessel preparatory to the effusion of lymph, by which it is permanently closed: this process is well known. But in the lower end the contraction is by no means so extensive, the retraction is less, and the internal coagulum not so perfect; the consequence is that secondary hæmorrhage is, according to Mr. Guthrie, much more likely to occur from the lower end, the difference being that the blood is of a dark colour, and flows or wells out in a continuous stream, and not with arterial impulse.

Mr. Guthrie gives the case of a sergeant whose femoral artery was divided by a musket ball. There was no secondary hæmorrhage till the tenth day. Mr. Dease tied the artery in the upper part of its course; Mr. Guthrie, who disapproved of this proceeding, prophesied a recurrence of the bleeding, which actually took place on the twenty-seventh day from the wound, and the seventeenth day after the application of the ligature on the femoral above the wound. The limb was amputated and the man died.

“ On examination the artery was found to have been divided exactly where it passes between the tendinous expansion of the triceps and the bone. The upper portion of the artery thus cut across was closed. A probe introduced into it from above would not come out at the face of the wound, although the impulse given to this part on moving it was observable in the middle of a large, yellowish-green spot, which I had previously declared to be the situation of the extremity of the artery, which had contracted behind this, in the shape of a claret bottle, for about an inch, having within it a small coagulum. The lower end of the artery, from which the hæmorrhage had taken place, was marked by a spot of a similar character; but on passing a probe upwards from the popliteal space, it came out at a very small hole in the extremity of the artery, in the centre of the yellow spots, the canal of the artery not being contracted and diminished, but only apparently closed by a layer of the yellowish green matter laid over it, and adhering to its circumference.”

He sums up his conclusions thus:

“ 1. That an artery as large as the femoral is capable, when divided, of taking on certain processes which will cause a suppression

of hæmorrhage from its upper end, and which suppression is usually permanent.

“ 2. That the bleeding from the lower end of the same vessel is less certainly and less permanently restrained, and not exactly by similar processes, &c.

“ 3. That this bleeding from the lower end of the vessel, which is more or less of a venous colour, and issues in a continuous stream, may be restrained by compression properly made on, and in the course of the lower part of the wounded artery; but that in no instance should recourse be had to a ligature on a distant part of the artery above the seat of the injury, until every other possible effort to arrest the hæmorrhage has failed.”

This fact of the greater liability of the lower portion of an artery to bleed being clearly established, the practice naturally follows of applying a ligature, in cases where a ligature is demanded, below as well as above the wound. When an artery of the larger class is either half cut or half torn through, the vessel, unable to contract or retract, may go on bleeding till the patient is destroyed, to prevent which the wound should be sufficiently enlarged, so as to expose the injury of the artery, and a ligature applied above and below it. When an artery is wounded at some depth, and the external opening is small, blood, besides issuing from the opening, flows into the cellular tissue, into which it is sent with more or less force according to the size of the artery. This blood may remain fluid or it may coagulate; if the first, the fluid blood should be evacuated, and a compress and bandage applied, for fluid blood readily runs into a troublesome suppuration. When the blood, “partly fluid and partly coagulated, continues to enlarge and pulsate, the extension of the mischief should be arrested by opening the swelling, and securing the artery by ligature.”

“ When an artery is wounded, and the external opening in the integuments heals, so as to prevent the blood from issuing through it, a traumatic, spurious, circumscribed, or diffused aneurism is said to form, according to the facility which is offered by the structure of the parts for the confinement or diffusion of the extravasated blood. A traumatic aneurismal tumour of this nature differs essentially from aneurism which has taken place as a consequence of disease, and not of direct injury. If a spurious aneurism forms from disease, the artery is in general unsound for some distance above and below the tumour. In the aneurismal tumour from a wound the artery is perfectly sound, except as far as concerns the seat of the injury. There is, then, not only a great and essential difference between these two kinds of aneurism as regards their nature, but also with respect to their collateral circulation, and the operation to be performed for their cure: and the surgeon may not overlook these facts.”

Mr. Guthrie gives a case of Mr. Keate's, where a boy fourteen years old wounded the femoral with a pen-knife: the wound healed, but the limb swelled, and the surgeon who first saw him thought it an abscess. Mr. Keate says:

“ I found the limb very much enlarged from the upper part to the knee, and with that peculiar discolouration which convinced me that blood was under the integuments, and I refused to open it where the abscess was supposed to be pointing until I had everything ready for the operation of securing an artery. There was no pulsation in it when I saw it, and I was assured there had been none. When all was ready I introduced the point of a lancet, and after a clot of blood had been forced out, a jet of arterial blood flew across the room. The hæmorrhage was arrested by pressure below Poupart's ligament whilst I enlarged the integuments. Two wash-hand basins were filled with coagula, and I put my finger on a large opening in the artery, under which two ligatures were placed by means of an eye-probe, and the artery was divided between them. The muscles had been cleanly dissected, and the cavity extended from the fork internally, and trochanter externally, to the knee. There was much less suppuration than I expected. The ligatures were detached in the usual time, and the patient entirely recovered.”

When the blood is coagulated, and there is no external wound communicating with it, the artery may be tied above the seat of the injury; but when the blood effused is partly fluid, suppuration is most likely to follow, and the hæmorrhage be renewed; this case of Mr. Keate's offers a favourable instance of the proper treatment. A great matter is to operate early, while the tumour is still small, and before extensive extravasation has taken place, for then the difficulties of the operation are very considerably increased. The following observations are too important to be abbreviated:

“ In my work on Injuries of Arteries, and in this place, treating of the collateral circulation, I have asked the question:—If the femoral artery be punctured near the groin, and a diffused aneurism form in a few days, extending up to Poupart's ligament, can the operation of placing a ligature on the external iliac be performed on the same principle, or with the same hope of success, as if the case had been one of true aneurism of several weeks', or months', formation? The answer is in the negative. The Hunterian theory of aneurism is not applicable to the case. The surgeon who placed a ligature on the external iliac, under such circumstances, would probably lose his patient from mortification, because the collateral branches would not yet have had time to enlarge. I may now add, if he should escape this danger, there is the risk of inflammation of the peritonæum, which has occurred to myself and to several others, and of the formation of matter behind it; or the wounds, if not closed, may bleed, or the diffused and spurious aneurism may en-

large from blood flowing into it from both ends of the artery, which are not partially closed, as in true aneurism; or it may suppurate and burst, and require, in each case, another operation in order to suppress the bleeding. It is an operation I shall shew you cannot be supported on principle, which has not succeeded in practice, and which will be resorted to hereafter only as a last resource, when those means I have pointed out have unfortunately failed, and when, in all probability, it will fail also.

“ The operation for placing a ligature on the subclavian artery, above the clavicle, in a case of wound of the axillary artery in the arm-pit, is equally inadmissible with that for applying a ligature to the external iliac for a wound of the artery in the groin, and ought alike to be abandoned. These are grave questions, which interest the public more than the profession. They only indirectly effect the anatomist and the surgeon, who does one operation with the same degree of knowledge and ability as the other; to the public, to the sufferer, they are questions of life and death. By that operation which, during the war in the Peninsula, was found to be efficient, the sufferer has a fair hope of recovery; after the Hunterian operation he may live through accidental circumstances only, which may be prayed for, but which can never be honestly and fairly expected: they should never, therefore, be trusted, for nothing which is dependent on chance or accident can or ought to become a principle in surgery. The Hunterian theory of the cure of aneurism is totally and utterly inapplicable to the treatment of wounded arteries, accompanied by an open wound, however small or distant. It is always doubtful, and frequently dangerous and destructive, even when the external wound has healed. A wounded artery should always be secured at the part where it is injured; and the greater number of those who suffer from such accidents, and are not so treated, will, in all probability, be lost, unless surgery can come to their assistance by ulterior and more painful operations.”

We wish we could enter into some detail of the many valuable cases related by Mr. Guthrie of the occasional occurrence of mortification after a wound of the femoral artery, and its almost inevitable supervention when both vein and artery are wounded and obstructed. It behoves the surgeon to look out for the earliest signs of mortification, and to proceed forthwith to perform amputation above the wound; it is not a case to wait for a line of demarcation, for if this is done the patient becomes so exhausted as to sink under the shock of the operation.

Another very important opinion advanced is, that the surgeon, in seeking for the wounded vessel, should not hesitate freely to divide muscular substance; the pectoralis when the axillary, the glutæus when the large deep-seated arteries of the

buttock, and the glutæus and solæus muscles when the posterior tibial are wounded.

John Bell, in commenting on a case of Deschamps, says: "Why should he have stopped at the border of the pectoral muscle; or what is this pectoral muscle that it should be respected more than the other muscles of the body?" This principle of not allowing muscles to confine his incisions, Mr. Guthrie fully supports, and with a mass of evidence and reasoning very hard to resist. The main point of his work is to prove that, in every case of wounded artery of a certain calibre and amount of hæmorrhage, it is best to cut down to the artery (undeterred by the fear of cutting through muscle), and pass a ligature above and below the wound. This is maintained by a number of facts, not all his own, but drawn from different sources, down to the present time. And though instances may be adduced, and are very fairly brought forward, where a ligature placed on an artery above the wound, and at a distance from it (the subclavian when the axillary was wounded, the brachial when the ulnar, &c.), have succeeded, yet the best rule is undoubtedly what Mr. Guthrie recommends; and the young army surgeon, indeed every surgeon, must derive the greatest advantage from a careful study of this book.

We exceedingly regret that, from the space we have allotted to the consideration of the wounds of arteries, we have left ourselves scarcely any for that of the subject of the second treatise, which is full of most interesting matter, and abounds in facts of the utmost value. Contusions of the abdomen, stabs, large sabre wounds, gunshot wounds, their treatment, and that of protruded intestines, omentum, &c., are treated with an experienced hand; as well as hæmorrhage into the abdominal cavity, mortification of a portion of intestine, and artificial anus. We can only present our readers with Mr. Guthrie's concluding summary, in aphorisms partly abbreviated and partly in his own words.

1. "Severe blows on the abdomen give rise to the absorption of the muscular structure, and the formation, in many instances, of ventral hernia; which may, in some measure, be prevented during the treatment, by quietude, by the local abstraction of blood, and by the early use of retaining bandages."

2. Abscesses in the muscular wall of the abdomen should be opened early.

3. Blows on the abdomen frequently cause rupture of the liver or spleen, when death follows from hæmorrhage. When

the hollow viscera are ruptured, death ensues from inflammation.

4. "Incised wounds of the wall of the abdomen, of any extent, rarely unite so perfectly (except in the linea alba) as not to give rise to ventral protrusion of a greater or less extent."

5. As the muscular parts unite in the first instance, after being divided, sutures should never be introduced into these structures.

6. Their apposition should be secured by positive sutures through the integuments only, adhesive plaster, compress, and bandage.

7. The only case where the suture may be passed through the whole wall of the abdomen is when the wound is very large, and the protrusion of the intestines otherwise ineffectual.

8. Enemata are preferable to purgatives.

9. "The omentum, when protruded, is to be returned, by enlarging the wound through its aponeurotic parts, if necessary, but not through the peritonæum, in preference to allowing it to remain protruded, or to be cut off."

10, 11, 12, 13, 14. If the intestine is only punctured, it requires no immediate treatment; but if there is a cut in it exceeding the third of an inch, it should be sewn up and reduced. The patient should lean to the affected side, to promote adhesion; the greatest quiet should be observed, and the diet be restricted. If the belly swells, and extravasated matters require to be let out, the sutures of the wound may be cut, or even, when the wound is small, it may be carefully enlarged. A wound should be kept open until it ceases to bleed, or the bleeding vessel, if possible, secured; if that is not possible, it must be closed, and the result awaited.

15. "A gunshot wound, penetrating the cavity, can never unite, and must suppurate. If a wounded intestine can be seen or felt, its torn edges may be cut off, and the clean surfaces united by sutures. If the wound can neither be seen nor felt, it will be sufficient for the moment to provide for the free discharge of any extravasated or effused matters which may require removal."

16, 17, 18, 19, 20. A wound in the abdomen should never be unnecessarily enlarged. When balls lodge in the bones of the pelvis, they should, when it can be safely done, be removed. When the bladder is wounded, a gum-elastic catheter should be kept in the bladder; but if the irritation from it is too great, an opening should be made into the bladder from the perinæum. All wounds of the abdomen should be treated on a strictly antiphlogistic plan.

Hand-book of Human Anatomy, general, special, and topographical. Translated from the German of DR. A. VON BEHR, by J. BIRKETT, F.R.C.S.E. London, 1846. 16mo. pp. 440.

THE present volume is one of a series in course of publication by German authors. It contains a large amount of anatomical information, but, we fear, not in a form to suit the taste or genius of the British student.

The first chapter gives a general outline of the constituents of the body in a condensed form; a subject on which most of our text-books on anatomy are deficient; they begin at once to describe bones and ligaments, muscles, nerves, and arteries: things, of the structure and composition of which the young student knows literally nothing. We are met, *in limine*, however, with what we must confess we do not very well understand, and certainly do not very much admire, namely, two definitions, one of anatomy, and the other of general anatomy. We know not whether it may be the result of early prejudice, or that the reminiscences of school-boy days and castigations,—severe, but well-merited withal,—have spoiled our taste, and impaired our judgment, but so it is, that we entertain a strong antipathy to definitions and propositions in almost every form. They seem to us to darken counsel by a multitude of words, and are too often used as a cloak, dark and impenetrable, to hide our ignorance. The one before us, on general anatomy, runs thus:

“The animal body consists of solid and fluid substances, which, permeating one another, may, by chemical means, be resolved into proximate and ultimate elements, and supply the material base to the forms of the elementary constituents and tissues.”

Now, we ask, where is the student that could unravel this, to us, at least, abstruse and unintelligible sentence? The first part of it, if correct, is plain enough; but do the solids of the body permeate the fluids; and is it while this mutual interchange is going on that the chemical agents are resolving them into proximate elements and ultimate elements? What to make of the latter clause in this definition we are wholly at a loss; for if the solids and fluids be already resolved, we know not where to look for the forms of the elementary constituents and tissues, the material base of which is to be supplied from the aforesaid proximate and ultimate elements. Once fairly over this asses' bridge, however, we meet a large amount of useful information in a condensed form in this chapter. The

writer first gives the different bases found in the body; then mentions those found in a pure state, as oxygen in the blood, and nitrogen in the intestinal canal; after which he enumerates the binary compounds, water, carbonic acid, phosphoric salts, chlorine, with their compounds, and sulphates; then come the ternary and quaternary compounds, generally containing nitrogen, upon which depends the rapidity with which they pass into a state of decomposition. The nitrogenized substances, proteine, albumen, pepsin, &c., come next under consideration, and after these the non-nitrogenized materials, as sugar of milk, lactic acid, and fats. Under the head of elementary parts he gives a slight epitome of the cell structure or theory now so generally received, and first discovered by Scheeraw in 1838; after which he takes up individual tissues, as the cuticle or epithelium, nails, rete mucosum, or, as he calls it, granular pigment, and hairs. The uniting tissues, such as the cellular, the ligamentous, fibrous, and serous tissues, are next brought under observation. The nutritious juices, as chyle and blood, and glandular structures, with their component parts, are also explained.

There are a few things in this chapter which we do not fully assent to: for instance, we do not incline to the opinion that the rete Malpighii is nothing more or less than the inner layer of the cuticle with the black pigment adhering to it; indeed we are opposed to the opinion that the cuticle consists of two layers, for although we may succeed, by boiling, in separating it into two parts, where it is very thick, yet we consider this subdivision as somewhat similar to that which we can make, *ad infinitum*, over the sac of an old inguinal hernia, where there is a considerable deposition of adipose cellular tissue. By long exposure to the air bones also become laminated, but every body knows that such is not their natural structure; and we would further say that the rete mucosum is a structure independent of, and easily separated from the cuticle. The division of all glandular structures into membranous and vascular we decidedly object to as unscientific and incongruous. Amongst the membranous, or glands of mucous membranes, he classes mucus follicles, cryptæ, agminatæ, solitariae, conglomerate, salivary, and, in fact, every gland in the body, the lymphatics excepted, which he places in his second class, or that of vascular glands, in which he includes the thymus and thyroid bodies, the spleen and suprarenal capsules. Now we do not admit these latter to be glands, inasmuch as they are not provided with excretory ducts, nor have we any evidence of a secretion taking place in them; we might as well say of the spleen, for instance, with some of the old anatomists, that it was a warming-pan for the stomach,

or that it was the seat of laughter; there is as much evidence for the one theory as the other. Upon the whole, however, we consider this a useful and instructive chapter to the student; although the shortest, we think it one of the best in the work. But we do not imply that its worth is, in any way, enhanced by its brevity; on the contrary, we should say that the work would be improved by the subjects in it being more fully treated of.

This introductory portion disposed of, we find the work divided into six parts. The first, on osteology, gives a concise description of the whole skeleton, including texture, development, and conjunction of bones; the foramina, with all the parts transmitted through them, the numerous eminences and depressions, with the soft parts attached to them, are also minutely and accurately given. The classification of joints, or, as he calls it, the conjunction of bones, is arranged into two classes, moveable and immoveable; in the first he omits the mode of junction termed *schyndeleses*, or that where one bone is grooved in between two plates of another, while he unnecessarily gives three varieties of the serrated suture. In the second division, the moveable articulations, we find the carpal and tarsal joints mentioned as examples of *amphiarthrosis*, and in the angular joints the distinction between perfect and imperfect, with which we are so familiar, is entirely omitted. In our juvenile days, when we first began to attend lectures, we remember being puzzled by the announcement that the bones of the head were nothing more or less than *vertebræ* expanded and moulded into their present shape; but here we have it propounded that "the skeleton is but a system of *vertebræ*, and that all the bones must be regarded as more or less perfect, or metamorphosed *vertebræ*." We meet with a large amount of anatomical information in this division of the work, but we think it would have been more intelligible, more simple, and consequently more useful to the student, if many of the long, hard, jaw-breaking Latin names had been left out, and plain English given instead.

Under the head *Arthrologia*, we find the ligaments and joints described: the classification, as before mentioned, we do not approve of; the origin, insertion, and direction of the ligaments, however, is accurately given, and easily understood; but there are some inaccuracies we cannot omit mentioning: for instance, the motion commonly termed *circumduction* is not given among those belonging to the spine, or shoulder joint; the *acromio-clavicular* articulation, and that of the carpal bones, is brought under the head of *amphiarthrosis*; the wrist-joint, or

that between the radius and ulna, on the one part, and the first row of carpal bones on the other, is called a free ball and socket joint; and the articulation between the first and second row of carpal bones is called a ginglymus. We do not allow that the posterior crucial ligament of the knee-joint slackens in extension and stretches in flexion; we believe that both the crucial ligaments are put upon the stretch in extension, and relaxed in flexion, thereby permitting a slight amount of lateral motion in the flexed position. And lastly, we do not admit that the superior tibio-fibular articulation is immoveable. In this part of the work we again meet too many long, hard, and useless Latin names; of this we give a single example; for instance, the moderators, or cheek ligaments, connecting the second vertebra to the occipital bone, are thus designated: "*Lig. lateralia proc. dentiformis s. alaria mancharti.*"

We next come to the subject of Myologia, or the Muscular System. It begins with a description of the structure, the physical and physiological characters of the muscles, with their general classification, after which individual muscles are taken up and described, but, we fear, not in a form to suit the dissecting room, or benefit the young student. The author presupposes the possession of a larger amount of information in his readers than he will generally find among students; we therefore think that this part of the work is not sufficiently clear in detail to benefit those for whom it is professedly intended.

In the next division of the work, under the head Splanchnologia, or Anatomy of the Viscera, we have the whole of the alimentary canal, from mouth to anus, the teeth included (would they not have been more at home among the bones?); then the appendages, as he calls them,—the liver, spleen, and pancreas,—are described; and after these the organs of respiration, with the genito-urinaries, male and female, all included in one chapter, and disposed of in some six pages. We think those subjects deserving of more space and attention. This brings us to the fifth division of the work, which treats of the Senses,—*Organa Sensoria*. The eye, the ear, and the nose are successively described, but taste or touch are not even alluded to as belonging to this or any other department of the work.

Angiologia, or the Vascular System, is next taken up, and here we are somewhat surprised by the announcement that "the parietes of the vessels consist of six membraneous layers, which are not, however, always present at the same time in every vessel." The elastic, or what in this country we call the middle coat, he makes the fifth, and states that it is only found in the larger

arteries and *veins*; while, in the next page, when more particularly describing the veins, he says: "These walls are thinner and more lax, and when the vessel is empty they fall together, as the elastic coat is entirely wanting in them." Surely there must be a typographical error here; neither author nor translator could give statements so contradictory of each other. Passing over such trifling mistakes, however, the origin, course, and relative anatomy of the arteries are faithfully given.

The subject of the nerves, *Neurologia*, including brain and spinal marrow, now comes under observation, and may be said to complete the work; at least, with their description terminates the special anatomy. This is an interesting chapter, and well worthy a perusal, as the parts are intimately gone into, while the dry, descriptive detail is relieved by many interesting and important physiological facts.

The whole work is wound up with a kind of appendix, or chapter of accidents, giving a little of everything under the somewhat novel name of *Topographical Anatomy*, or what, in plain terms, we would call regional anatomy. On this we shall only remark, that it supplies some deficiencies in other parts of the work, and that is a mode of teaching anatomy to which we are very partial, as we consider it highly instructive, and but too much neglected.

To the advanced student, to those engaged in preparing young men for examination, and to lecturers on anatomy, deficient in memory, and requiring to absorb, or take up in a few minutes what will occupy them an hour in describing, we can recommend this work with confidence; but we do not think it calculated for the junior student, nor at all likely to take the place of our ordinary dissecting books. If the numerous and, as it appears to us, useless Latin names, occupying nearly a fourth of the work, had been omitted, it would have been less perplexing to the beginner, and certainly more portable as a hand-book to all wishing to use it as such.

On Tumours of the Uterus and its Appendages. By THOMAS S. LEE, M. R. C. S. E. London, Churchill. 1847. 8vo. pp. 274.

THE volume before us obtained the Jacksonian Prize for 1844, which is a strong testimony to its merits, and we think that the voice of the profession will add that it deserved it. To a great extent the information it contains has been obtained from living authorities or from the preparations in the different museums; to a more moderate extent the author has drawn

upon the recorded experience of others; and he has thrown the whole together with a good deal of judgment. We do not mean to say, that the various and complicated problems connected with tumours of the uterus and its appendages have been solved, nor could this have been expected of a young man when so many of longer experience have failed; but on some of them additional light has been thrown, and towards the solution of others valuable contributions have been collected.

The essay embraces tumours of the uterus of various kinds, of the ovary, and of the vagina, and external organs. We shall glance at some of them.

The description and history of fibrous tumors of the uterus is good, but we need not enter upon it at present. As to their situation the author observes:

“The most usual position for those tumours is the submucous, viz., those projecting into the cavity of the womb; and the pedicles of these are generally situated just below the openings of the Fallopian tubes. The next position in which they are the most abundant is the posterior wall and fundus of the uterus; they are very rarely situated in the anterior wall, and still more rarely in the cervix uteri. These observations were obtained by the examination of seventy-four preparations in the Museums of the Royal College of Surgeons, University College, Bartholomew’s, Guy’s, and King’s College.”—p. 3.

As is well known, the situation of these tumours determines their future progress in many cases. When sufficiently near either surface, their outer covering becomes gradually thinned until it offers no resistance, and the tumour may be detached; or, the envelope being more tenacious, it may retain its connexion with the tumour, which will then become pendulous, and when internal it is called a polypus. Opinions vary as to any increase taking place in the uterine tissue surrounding an imbedded tumour. Mr. Lee remarks:

“From the difference of opinion that exists on this point, I have examined many preparations to endeavour to ascertain the truth. I find that the increase of uterine tissue is not always constant. In Guy’s Hospital Museum there are several preparations, in some of which this increase of uterine substance is very great, while in others there is a thinning of the fibre on the tumour. In Dr. Reid’s case the walls were an inch thick, and in the University College Museum there is an extremely large tumour, surrounded by very thin uterine walls. When the tumour projects into the cavity of the uterus, its walls are generally increased in thickness, but when it is imbedded in its substance, the uterine tissue is most frequently lessened.”—p. 5.

When a fibrous tumour is cut open,

“It is of a pale ash colour, intersected and interlaced by shining

white lines, producing interspaces, which are filled with a dirty white matter. * * * * * Some tumours, when cut into, present a number of layers upon a central nucleus, with such regularity as to lead to the supposition that they had attained their bulk from actual deposit."

"I have examined many portions of these tumours from various situations of the uterus, by the microscope, and I find that they invariably present a cellulo-fibrous appearance. From a part of the central tumour which accompanied the essay, three different degrees of the same object were observed: in one portion the cellular tissue predominated; in another the fibrous tissue, combined with cells; and in a third, the true looped fibrous tissue, radiating from a centre and diverging into a form resembling the star-fish. No other cell, except the simple nucleated cell, could be distinguished. Dr. Oldham states that the anatomical elements of the fibrous growth are a clear, unstriped fibre, closely packed, and interspersed, in some instances, with closely packed crystalline grains (the existence of which has long been known as a chemical constituent of them) and minutely divided arteries. These growths may degenerate into cartilaginous or bony deposits."—p. 6.

Let us now pass on to the diagnosis of these tumours, which is practically the most puzzling, and, in some cases, of critical importance. Mr. Lee observes, very truly, that "there is very little difficulty in detecting a hard, round, circumscribed tumour of the fundus uteri in an old woman in the decline of life, and with thin abdominal parietes;" but suppose we have a large tumour in the region of the uterus, and extending laterally to the ala of the os innominatum, or one filling up the brim of the pelvis and immoveable, or projecting backwards and pressing upon the rectum,—or any of the hundred questionable cases that occur in practice,—we shall find the diagnosis by no means so easy. The symptoms are seldom so characteristic as to enable us to decide from them, neither are they to be rejected, especially those which arise from mechanical disturbance. Upon these, and a very careful external and internal examination, our diagnosis must depend. The mechanical symptoms are, a fulness and weight in the pelvis; a desire to pass water frequently, with occasionally a little difficulty in doing so; some difficulty in emptying the rectum; and pains shooting through the pelvis and down the thighs, owing to the tumour pressing upon the nerves which traverse the pelvis.

The objects and results of examination *per vaginam* are thus stated by Mr. Lee:

"We have three indications before us: first, to ascertain the character of the os uteri and neck of the womb; secondly, the weight, with the mobility or immobility of the uterus; and thirdly, whether the uterus is connected to any mass previously felt above the pelvis.

"Tumours of the cervix uteri are very rare, but when placed in

that position they distort the os uteri, which can very rarely be felt; when anterior they bulge over the opening and throw it upwards and backwards; when posterior, the opposite result is produced. These tumours can be traced into the substance of the womb; there is no pedicle, but an apparent elongation of one of the lips. The tumour itself does not arise in the tissue of the cervix, but above it, and pushes that structure before it in its descent.

“In tumours of the cavity sometimes the os will be felt open, with a protruding mass between the lips, very sensitive, and which can be traced into the cavity; at others the os will be closed and the neck will become expanded and lost in the substance of the womb, as in pregnancy.

“When the tumour occupies the posterior wall, it usually pushes the os very much forward, under the pubis, sometimes so much so as to be with difficulty felt; at other times the neck of the womb lies closely attached to the under surface of the tumour, but so compressed that the uterine sound is unable to be passed. The observation of these peculiarities, which are produced by fibrous bodies on the neck of the womb, is very important; for, as we shall see, it is by these we are able to judge of the increase or decrease of the tumour itself; for if the tumour increase, still the lip of the neck will be felt; and if it decrease, it will become more developed and natural, occupying also its proper position in the pelvis.

“The second indication is to ascertain the weight, mobility, &c., of the uterus. In a properly balanced uterus, and one free from disease, we are hardly sensible of its weight when thrown up on the top of the finger. The weight of a virgin uterus is about an ounce, and after the woman has borne several children it is seldom more than one ounce and a half or two ounces, and is distinctly moveable in all directions; but when distended by pregnancy or a foreign body, there is a sensation of fulness perceived just above the neck, it bulges out towards the rectum and bladder, and when pushed upwards and allowed to fall upon the finger there is a distinct sense of weight. When a fibrous tumour exists the vagina is generally much lessened in its length, a hard mass is felt sometimes resting on the perinæum, almost immovable, but when moveable, it is heavy, and pressure from below is generally communicated to the hand placed above the pubis. This lessening of the vagina, the hardness of the mass, the bulging of it into the rectum, and the communication of pressure from below to the hand above, gives good evidence of a fibrous tumour.

“When a tumour is distinctly felt above the pubis, we ascertain its connexion with the uterus by tracing it down into the pelvis, by drawing the tumour upwards, and observing the changes produced on the uterus itself, and by the introduction of the uterine sound, the handle of which will move with the corresponding motions of the tumour.”—
pp. 15, 16.

These may be called the positive grounds of diagnosis of uterine tumours, the comparative grounds are those we derive from the distinctive features of other diseases with which these tumours are liable to be confounded, as, for instance, induration, pregnancy, ovarian dropsy, abdominal tumours, polypi, &c. The characteristic peculiarities of these diseases, and their diagnostic marks, are very well enumerated by Mr. Lee, but our limits will not permit us to enter into a consideration of them. We shall, however, make a few remarks upon the positive signs given by our author. In the first place, we think he has spoken of the sensibility of these tumours in too general a manner, as if such was present in every case. Now, in many cases they are sensitive, no doubt; but in others the sensibility is merely that of the uterine tissue covering them, not increased, and by no means remarkable; whilst in many the sensibility is positively decreased. In some cases, where the tumour is pressing into the cavity, in process of becoming a polypoid tumour, it is positively insensible; this we have seen over and over again. This sign, therefore, must be cautiously used.

Again, we think Mr. Lee might have added to our means of fulfilling his second indication, by describing the normal situation and relations of the uterus in the pelvis in an upright or reclining position. These are pretty regular in the healthy, unimpregnated condition of the organ, and every practitioner necessarily ascertains them for himself, as a standard by which to judge of abnormal deviations; but they are rarely described in books. When the body is erect, the fundus uteri is tilted forward against the bladder; and if that viscus be empty, the body of the uterus may be said to rest against it, and upon and above the upper edge of the symphysis pubis, the cervix being consequently inclined backwards; the level of the os uteri being nearly that of the brim of the pelvis, if the patient have not borne children. If the patient lie down on her back or side, the position, and in some degree the level of the womb, will necessarily be altered. The fundus will fall backwards or to one side, and the whole organ will be higher in the pelvis.

An examination *per rectum* is of great value, not merely in distinguishing ovarian from uterine tumours, but by enabling us to trace further the continuity of substance in the latter. This continuity is also evident when slight percussion is made upon the abdominal tumour by one hand, a finger of the other being kept upon the cervix, and this we regard as

one of our most valuable means of diagnosis, but it is one that requires a good deal of experience.

Lastly, we think Mr. Lee has overrated the value of the uterine sound. We admit that in some cases it is highly useful, but there are many cases in which it cannot be introduced at all, as, indeed, Mr. Lee says; many in which, when introduced, it affords but little information; and others in which its use is positively mischievous.

“After rough manipulations with this instrument,” Mr. Lee observes, “I have seen, in two cases, violent inflammatory peritonitis ensue; and inflammatory action is set up in some cases after the most careful introduction of it into the cavity of a uterus, when there are fibrous growths.”—p. 24.

According to our experience, the uterus is highly sensitive and easily irritated, and, therefore, any investigation into the state of its cavity should be conducted carefully and gently.

Our limits prevent us at present entering upon a more lengthened examination of Mr. Lee's volume, but we may, perhaps, refer to it at another opportunity. Meantime, we repeat that it contains many valuable facts, and evinces careful and intelligent industry, and we strongly recommend it to the profession.

Notes on Epidemic Cholera. By R. HARTLEY KENNEDY, M. D., late Physician-General and President of the Medical Board, Bombay. Second Edition, revised. London: Smith and Elder. pp. 279. 1846.

THIS is one of those odd works which issue occasionally from the Press, in which the writer gets a theory into his head, makes a hobby of it, and ultimately rides it to death. Nor is there anything in this volume, as a whole, to set off against the theory which takes such a prominent place in the work. We have ever thought that medicine could not by possibility exist without something of theory to support it: but then the theory ought to consort with well-known facts; it should not, like the chrono-thermal theory of Dickson, be opposed to almost all that is known in medicine. What, then, is the theory advanced in respect to cholera? That its essence consists in “a nervous derangement, similar to concussion of the brain, and that the vomiting and purging are sanitary processes.” This is what the author calls the *Lethi Fabricator* in cholera; and every opportunity is taken, throughout the work, to make facts square

with this theory. It is not merely that he would draw an analogy between the effects of "concussion of the brain," and the disease known as cholera, but he would lead us to suppose that this disease was actually a concussion of the brain. He thus speaks, p. 121:

"It is my object to convince my readers that the collapse in cholera is induced by concussion of the brain, produced by some unknown cause, and that the purging and vomiting are sanitary processes."

It must certainly strike every one as strange, to find in a work devoted to the consideration of cholera a chapter,—and a long one, too,—on concussion of the brain! Yet so it is; and we have actually a great part of what the celebrated Abernethy published, on concussion and its several stages, quoted at full length. Where, then, is the identity or similarity, we would ask, between the two? The one being the result of direct injury to the frame, and, without something of violence taking place, never exhibiting itself to the surgeon; the other the result of some agent, of which at present we are in total ignorance; of which the effects are as different as can well be imagined to exist between a medical and surgical disease. Is vomiting so common a result of concussion of the brain? We believe not. On the contrary it is a symptom which probably does not occur in more than half the cases which we meet with. Often it is merely a transitory symptom; and sometimes there exists but a feeling of nausea. The vomiting, however, which takes place in cholera, at least as we have seen the disease, is violent, and frequently most obstinate. Granting, however, that vomiting does occur in both diseases, what shall we say of the purging? We believe that in the great majority of cases of concussion the very contrary state obtains, that is, one of constipation. When the shock, indeed, is a very severe one, the sphincters of the bladder and rectum may be relaxed; but need we observe what a contrast there is between such a state and the case of a cholera patient affected with purging. But farther still, what possible analogy can there be between the alvine discharges of a cholera patient and one labouring under concussion? Not the remotest: the one is as characteristic as the other is wanting in expression, so to speak. But if we pass on to some other symptoms which the cholera presents, we are still farther from being able to find any analogy between the two diseases. It has never been our lot to witness anything in cases of concussion like the cramps of cholera, nor the same state of lividity of the extremities, or wrinkled state of the skin. We might pursue these remarks further, but the matter is really too absurd, and we therefore

hasten on to notice any points which appear of sufficient importance.

The two first chapters call for no remarks. They are occupied with a detail of how the author came to witness the disease, or, as he has expressed it, “The History of the Disease as it has appeared under my Observation;” and secondly, “Theories respecting Epidemic Cholera.” In the third chapter we have the question of the contagious nature of cholera discussed. The author is a firm believer in its contagious character; hence we have a circumstantial account of how the disease was conveyed from one place to another, never reflecting for a moment that the disease appeared in places which had no known communication with any other at the time. The fact of a number of people being attacked with cholera in a certain locality is not sufficient proof of its contagious nature; other causes may have been, and no doubt were, in force at the time. Suppose we were to advance the opinion that because pneumonia occurs now and then under exactly similar circumstances, that therefore it was a contagious disease,—would we not be laughed at, and justly, too? The same might be advanced of other diseases, as croup, inflammation of the brain, &c. We think such considerations as these should make every one cautious when treating of the origin and spread of epidemic diseases, cholera amongst the rest. Whilst speaking thus of contagion, we do not positively assert that the latter disease may not become contagious under certain circumstances; but, from what has come under our own observation, we are inclined to the opinion that it is commonly not so. In the year 1832 we saw cases of the disease seven miles from Dublin, where the closest inquiry could not make out any communication with the city for weeks previously. We have also several times seen children remain healthy whilst sleeping in the same beds with their mothers, who were labouring under cholera. These reasons appear sufficient to at least make us cautious in coming to a conclusion on the matter, and so we leave it for the present(a).

Another point noticed in this same chapter is, whether cholera, as it appeared in the year 1817, be a new disease or not. After reading what the author says about it, we confess we are still in doubt as to his opinion. He seems, if we rightly understand him, to think that the disease had appeared before;

(a) In connexion with the progress and spread of Asiatic cholera, and its contagious character, we beg to refer our readers to Dr. Graves’ masterly report on that subject in the sixteenth and seventeenth volumes of our former series.—ED.

and this is one of the few points in which we agree with him. It has often happened to us to hear persons express their opinion that the cholera had never appeared before,—that in fact it was a new disease. The opinion on this matter seems to be very general, and yet we are satisfied it is an erroneous one. For proof of this assertion we need only refer to the work of Curtis on the Diseases of India, published, if we mistake not, in the year 1807. In it will be found the disease described so accurately that the reader cannot have the slightest doubt on his mind but that the genuine Asiatic cholera had been witnessed by that author. It is called the “spasmodic cholera cramp ;” and were not the extract a very long one, we would introduce it here. This point, considered in a general way, is one of some importance, but our space forbids any further notice of it.

Chapters VI. and VII., “On the Nature and Character of critical Discharges,” and “On the nosological application of Cholera,” call for no notice, except that we are quite at a loss to understand what objects the writer could have had in penning them. Both of them abound in long Latin quotations, and in extracts from the writings of Abernethy and others, all of which might better have been left out, the more so as they have no practical bearing on the subject at all.

Chapter VIII., “On the Varieties and Anomalies which appear in Cholera, and on the *Cholera Spontanea* of Cullen.” We have here described the three varieties under which the disease shewed itself in India. The two first are descriptive of the disease as it appeared in the greater number of places ; the one merely differing from the other in the greater intensity of the symptoms present. The third is a much rarer form of the affection, though even it seems to be but a more exaggerated degree of the two former. It is, however, remarkable in this respect, that there was neither vomiting nor purging present in this form of the disease ; collapse marked its onset and its termination, while its course was run in a period varying from one to four or six hours. Cases of this description were met with in Dublin in 1832–3.

In Chapter IX. we have Dr. Kennedy’s account of the practice which he adopted in the disease, and which, of course, he says he found most useful. It is avowedly founded on the theory before noticed. We confess, as far as our experience of it has gone, it would not agree with the author’s. Following out his theory, the first measure advised is bleeding, which he speaks of as if it were a means which could always be used, provided the patient be seen at an early stage of the disease. This does

not accord with what we have seen, nor do we think it at all prudent for an important measure, as this must ever be, to be spoken of so much as a matter of course part of the treatment. Cases do occur, we know, where blood may be taken with advantage, but it by no means follows that such treatment is therefore to be generally adopted. From the author's writings one would never suppose that there was actual danger in such a plan of treatment, and yet we have heard of such a result; a circumstance which is particularly noticed by Annesley in his great work. This able writer states that he knew of several instances of the patients sinking at once on blood being taken from the arm. It appears rather strange, that Dr. Kennedy never notices Annesley's writings at all, though on some points they might have been referred to with the greatest advantage to the subject under consideration. On local bleeding our author is entirely silent, as if he never had recourse to it at all: we however, have seen it very beneficial; and a few leeches applied over the stomach, and a cupping-glass subsequently, appeared to us a most effectual means of allaying the vomiting.

But our author believes the vomiting and purging which take place in cholera to be "sanitary processes;" and hence, on this theory, it may be at once guessed what other treatment he advises, viz., emetics and purgatives. Now we believe the former class of medicines to be very useful in the collapsed stage of cholera; not, however, because they add to the vomiting already existing, but because they are amongst the best means we possess for allaying it. We object *in toto* to the class of emetics advised (hippo and tartar emetic), and in their place would substitute powdered mustard, as being an agent which, while it is very certain to act as an emetic, is also useful in rousing the system from the state of collapse; and which, should it not act as an emetic, we have seen most beneficial in the way we allude to.

Purgatives are another class of medicines on which the author seems to have placed the greatest reliance. At p. 231 we have the formula for the particular mixture which he was in the habit of ordering, consisting of castor oil, honey, tincture of opium, and camphor mixture; of this an ounce was given according to circumstances. This was not a form of medicine at all suited to the disease when it appeared amongst us. Any thing of the sort was at once vomited; and one of the greatest difficulties appeared to us to consist in allaying the irritability of the stomach, which a mixture of this sort would certainly not do. But there is another consideration not to be lost sight

of. From the author's remarks he seems to look upon purgatives as a necessary part of the treatment; but whether this be so seems more than doubtful. This we can positively assert, that here a great number of persons attacked with the cholera had premonitory diarrhœa; and for the cure of this we found nothing more efficacious than astringent draughts. Our management of the disease itself has been successful precisely as we were able to check the purging. The immense serous discharges, so characteristic of the complaint, must be derived from the blood, and hence we would explain the advantages derived from the astringent treatment. It is our conviction that much has yet to be learned of the management of cholera within the first four or five hours after the onset of the real disease.

With the medicines just spoken of the author used pills of camphor and opium, whilst externally the patient was well rubbed with an anodyne and stimulant liniment; and in case the vomiting proved obstinate, active blistering was used.

On the secondary fever of the disease the author gives us actually but half a page! True, indeed, he may not have seen such an affection in India: we can only say that in Ireland it formed a most important sequela of cholera, and materially added to the mortality of the disease.

As a whole, the work before us, considering that it is a second edition, seems to have been uncalled for. If we except the theories, there is really nothing in the work which has not been infinitely better handled in the works of Annesley and others. When the first edition appeared, in 1826, we might have been inclined to look at it in a different point of view; but twenty years have added much to our knowledge of the disease, which knowledge, we fear, our author has not made himself acquainted with.

A Commentary on the Hindu System of Medicine. By T. A. WISE, M. D., &c., Bengal Medical Service. Calcutta, 1845. 8vo. pp. 431.

ALTHOUGH Indian chronology is but matter of doubtful computation, down to the period when the history of the Hindus becomes contemporaneous with that of Europe, it is, nevertheless, certain that at a very early age the Hindus had attained a higher degree of civilization, and had made greater advances in the arts and sciences, than any other ancient people, except the Egyptians. A great portion of the inscriptions discovered in various parts of India, on monuments of different kinds, relate

to a very remote era ; whilst many of the monuments themselves, for grandeur of conception, delicacy of execution, and expense of construction, are unrivalled by the works of modern days. A people who had thus distinguished themselves in the very dawn of history by their power, their riches, and their scientific attainments, may be supposed to have studied with much care and zeal the means of alleviating pain and curing disease. That this was really the case the Hindu records of medicine clearly indicate ; for “ one of the fourteen *ratnas*, or precious objects which their gods are believed to have produced by churning the ocean, was a learned physician.”

The sacred documents on which the proof of Indian antiquity rests are the Vedas: they are supposed to be the original code of divine legislation received from Bramha, and were believed to contain all the knowledge required by mankind. The date of their compilation, as calculated by the astronomical observations which they contain, has been fixed at the fourteenth century before the Christian era, or about two centuries before the ordinary date of the fall of Troy.

When we first advert to the subject, it appears, indeed, extremely improbable that scientific treatises should have been preserved from so distant a period. The best informed and most judicious Anglo-Indian scholars, however, seem unanimous in the opinion that the above date, assigned to these observations by Mr. Davis, one of the most successful investigators of Indian astronomy, is correct. Some centuries afterwards,—about the time, it is supposed, of the promulgation of Menu's code of laws,—other supplementary Vedas, called Upavedas, were added ; one of which, the *Ayur-veda*, is a system of medicine, and is considered to be of the highest authority. This is the sacred medical record of the Hindus, and “ was intended to teach the proper manner of living in this world, by preventing and curing diseases in the present state.” Of this remarkable work little has escaped the destructive ravages of time ; numerous commentaries, called *Shastres*, have, however, been written upon it, from which we are enabled to judge of the contents and arrangement of the great original.

Dr. Wise, feeling a strong interest in the history of medical science, has employed his leisure for many years in noting the development of systems in different schools and nations, and was induced, at an early period of his residence in Bengal, to examine the Hindu medical *Shastres*. Whilst other Sanscrit compositions have engaged the attention of European philosophers, the medical *Shastres* have been hitherto for the most part either neglected or undervalued ; and although fre-

quent allusions are made to them in the works of Wilson, Heyne, and Ainslie, a comprehensive view of the Hindu system of medicine was still wanting to complete our information on the subject. It has even been asserted by Sir William Jones, "that there is no evidence that in any language of Asia there exists one original treatise on medicine considered as a science : " and Mill says: " Even medicine and surgery, to the cultivation of which so obvious and powerful an interest invites, has scarcely, beyond the degree of most uncultivated tribes, attracted the rude understandings of the Hindus." To refute these opinions, and to supply the deficiency in the ancient history of medicine, Dr. Wise has published the present volume.

The first part is devoted to "the consideration of the origin and history of medicine ; of the rank of practitioners and the duties of teachers ; of the character and duties of pupils ; of the duties of the physician, attendants, and patient ; and of the recompense of practitioners."

It appears that the sacred Ayur-veda contained treatises on surgery, practice of physic, demoniacal possession, toxicology, and other subjects ; to these was added a description of the structure of the human body, which there is every reason to believe was derived from actual dissection, as the prejudices against touching the dead body were not in existence at the time it was written.

The voluminous character of the Ayur-veda, and the obscurity of its style, induced various sages, at subsequent periods, to abridge, condense, and explain its contents ; and thus originated numerous other medical works, for the titles of which, as well as the names and histories of their authors, we must refer our readers to Dr. Wise's commentary.

The Hindu physicians constitute the medical caste of the Vaidhyas, or those who understand *vidya*, i. e. the Ayur-veda or medical Shastre. These physicians have free access to the various Shastres or commentaries on the sacred writings, and are the professed, though not the exclusive, practitioners and teachers of the healing art. The qualifications necessary to form a successful student and a good physician are enumerated with much minuteness, and exhibit a strange combination of sound sense and superstitious folly. Thus we are told that the student "should be active in his duties and not fatigued by his studies ; he should possess gravity, a good memory, acute senses, and considerable acquirements." But if he seek for long life, "he should eat with his face to the east ; if for exalted fame, to the south," &c.

Amongst the indispensable attributes of a physician, "he

should possess a healthy body ; he should keep his nails and beard short, his body pure, his clothes clean, and he should wear shoes and a small turban. He should carry an umbrella and a stick in his hand."

In the description of his character, however, we find many admirable qualities. The good physician should possess, besides a perfect knowledge of his profession,

" A retentive memory, and should always be amiable, cheerful, and collected. * * * His language should be mild, candid, and encouraging, rather like that of a friend than an acquaintance ; and he should be always ready to assist the sick. His heart should be pure and charitable ; he should possess a character for strict veracity ; should be of calm temper, and of the greatest sobriety and chastity."

The necessity for practical knowledge and experience is everywhere strongly insisted on, without which a mere knowledge of books will never insure success, or lead to eminence. It is the combination of these two essential qualifications,—the knowledge of the Shastres and of practice,—which is required, " when medicine becomes like the water of immortality."

The value of mercury as a therapeutic agent appears to have been appreciated by the Hindu sages, even at these early times ; for they state that—

" The practitioner who knows the value of quicksilver, &c., is like a god ; one who knows the qualities of herbs and roots is like a man ; one who knows the use of the knife, and of fire, resembles a demon ; and he who knows the proper prayers to be offered up in the time of sickness, is like a prophet."

The directions given to physicians for their general conduct are numerous but unimportant ; the greater number of them have reference to the peculiar superstitions of the Hindus, and amongst these the careful observance of omens is strictly enjoined. A great deal of very judicious advice is given respecting the mode of examining a patient, and of ascertaining the state of the different functions, secretions, and evacuations. The practitioner is recommended to observe much caution in the employment of medicine in fatal diseases ; as, " by administering medicines in such cases, without previously stating the danger the patient is in to his relations, he will only bring discredit on himself and on his profession." He is also warned, that a physician who attends a patient without having been called in " will never be respected."

The chapter " On the Recompense of the Physician," is a short one ; it contains, however, many just and benevolent precepts, though mixed up, as usual, with Hindu prejudices :

“ When a physician has cured a disease, he is entitled to the usual gifts for the performance of a good action. These will vary with the rank and condition of the patient. Money will be the recompense bestowed by the rich ; friendship, reputation, increase of virtue, prayers, and gratitude, will be that of the poor. When a Guru, Brahman, or a Dandi, a relative, an humble and good friend, or one without relatives, consults a physician, he must not accept of any pecuniary recompense : his reward in such cases will be an increase of knowledge, and the gratification of his desires in having an opportunity of performing a good action. His cures will insure the admiration and esteem of all men ; he will be honoured and respected as a master, and after death he will go to heaven. Should the patient prove ungrateful after being cured, his holiness and good fortune will pass to the physician. But the physician must avoid administering remedies to hunters or great sinners. Such people do not deserve his assistance.”

In the second book are considered the elements of the body, generation, and growth ; the nature of the corporeal, vital, and spiritual parts ; the nature of temperaments, ages, and death.

The signs of pregnancy recognised by the Hindus are :

“ The skin round the nipples becoming of a dark colour, and the hair upon the body becoming more distinct and prominent. The person feels weak, the eye-lids heavy, and the eye-lashes closed ; much saliva is secreted ; sickness and vomiting occur ; and even pleasant-smelling things are disliked, and produce sickness.”

The longings of the pregnant woman, it is observed, should always be gratified, otherwise “ the child will be born crooked and crippled, or will be small in size, dumb, or cannot speak distinctly ; will be blind, or have his eyes defective, or will be an unbeliever in the sacred Shastres.” The menstrual discharge is stated to be blood in an altered state, and the average period of its duration from the twelfth to the fiftieth year of age.

The Hindu Shastres allow ten calendar months for the perfection of the foetus *in utero* ; and the circumstances of its expulsion are thus detailed :

“ At the tenth month the foetus acquires knowledge, and prays to God, and sees the seven heavens, the earth, and the inferior regions. By the air of the pelvis (*opana bayu*) the foetus is then expelled ; as an arrow is shot from a bow, and the child falls insensible to the ground. All his former knowledge is immediately forgotten, and on losing so many pleasing illusions, he cries.”

The anatomical and physiological sections contain much interesting matter, which proves that the ancient Hindus had

made considerable progress in these sciences; our limits, however, will not admit of our alluding more particularly to this portion of the work.

In the chapter on Death, the immortality of the soul is distinctly affirmed; and the doctrine of metempsychosis fully developed. The reflections on death in the following passage are full of truth and sound morality:

“Death is always near; and when it occurs, nothing but the sins and virtuous actions which have been performed accompany the soul. When a person leaves his corpse, like a log or a lump of clay, on the ground, his kindred retire with averted faces; but his virtue accompanies his soul. Continually, therefore, let him collect virtue, for the sake of securing an inseparable companion, with which he may traverse a gloom, how hard to be traversed! For, in his passage to the next world, neither his father nor his mother, nor his wife, nor his son, nor his kinsmen, will remain in his company; his virtues alone will adhere to him. Single is each man born; single he dies; single he receives the reward of his good, and single the punishment of his evil deeds.”

The third book treats of therapeutics, under which head are included the various means employed by the physician for curing diseases, namely, “Hygeology or regimen; *Materia Medica* and Pharmacy, or preparation of medicinal agents; and Surgery, or all manual applications for the cure of injuries and diseases.”

The practitioner is directed to give instructions to persons consulting him, not only as to the manner of curing, but also of preventing the occurrence of disease. These instructions relate especially to early rising, cleansing the mouth, anointing the body, exercise, shampooing and rubbing the body, bathing, clothing, diet, and sleeping. On the subject of diet Dr. Wise says:

“The Hindu medical writers usually commence the cure of a disease by arranging the diet that is to be followed by the sick person. So much do the Hindu physicians rely upon diet, that they declare that most diseases may be cured by following dietetic rules; and if a patient does not attend to his diet, a hundred good medicines will not remove the disease. The generality of diseases being supposed to be produced by derangement of the humours, if one or more are morbidly increased in quantity, their indications of cure are commenced by promoting the just balance of the elements and humours, by a judicious choice of aliments, and by such means as assist the vital principle on the completion of the assimilation. On this account they have not only been careful in describing the regimen, but also the food and drink for the different seasons, and even the vessels in which they should be kept.”

The *materia medica* of the ancient Hindus was evidently very comprehensive, including remedies derived from the vegetable, animal, and mineral kingdoms. Dr. Wise has given a catalogue of the principal medicinal agents, arranged according to their effects, with their modes of preparation and administration, doses, &c. Amongst the most important articles we find four different preparations of mercury,—the black, the white, the yellow, and the red. To each of these extraordinary virtues are ascribed, and we are told that when they affect the gums a gargle of curdled milk should be employed. Lead is used for the cure of gonorrhœa and chronic diarrhœa; tin as an anthelmintic; and the white oxide of arsenic, in combination with aromatics, is recommended to check obstinate intermittent fevers. The department of surgery is held in high estimation by the Hindus. In the Ayur-veda it is considered as the first of the eight branches of the medical science imparted by the Deity to mankind; and the successful performance of operations is declared to “impart holiness, riches, and a good name, and to ensure a passage to Heaven after death.”

In the chapter on surgery are described the nature of those diseases which are to be cured by surgical means, the mode of performing operations, the different instruments employed, and the treatment of accidental injuries.

The operations for improving and forming new ears and noses are those which are most minutely described. The loss of the nose being a frequent punishment in the native courts, it is probable that the Hindu surgeons were often called in to repair the deficiency; consequently, rhinoplastic operations demanded, and seem to have received, considerable attention from them. The following are the directions given for making a new nose :

“ A fresh leaf is first cut, of exactly the size of the nose; it is then to be placed upon the cheek, and the necessary quantity of skin and cellular membrane is to be dissected. The nose is then to be scarified, and after dissecting up the flap, it is to be placed upon the raw part of the nose, to which it will adhere. Sutures and bandages are applied to keep the parts together. After the bandage has been applied, a couple of wooden canulæ are to be introduced into the nostrils, to allow breathing, and to support the new nose. A piece of linen cloth, previously soaked in oil, is to be applied over the bandage; an aperient is then to be given to the patient, and his general health is to be attended to.”

The fourth book contains remarks on disease in general, followed by the description and treatment of particular dis-

eases. The irregularities in the quantity and quality of the humours are stated to be the proximate cause of diseases ; and among the humours subject to derangement, life is included.

“ Life is the last formed of the humours, and is the chief ; for as long as it remains, the muscles continue to perform their offices, and the person’s voice, and the colour of his body, continues good, and the ten senses continue in a healthy state. When diminished, the body dries, and without it, the person dies.”(a)

Small-pox, we are informed, was well known at a very early period in Hindustan ; and so much was it dreaded by the native physicians, on account of its frequency and virulence, that they raised it to the rank and honours of a goddess, named Shitalá, whom they endeavour to propitiate, even at the present day, with prayers and offerings, whenever the disease makes its appearance. Five different forms of ulceration are described as occurring on the genital organs, some of which are ascribed to impure connexion : no mention, however, being made of any constitutional affection resulting from them, we may fairly conclude that they were mere local diseases. In this book our author brings forward his own views respecting the origin of small-pox and syphilis, and arrives at the conclusion that the venereal disease “ was introduced from America to Europe and Asia ; as the small-pox and measles seem to have first appeared in Asia, from whence they spread, and committed such ravages in Africa, Europe, and America.”

Midwifery, and the diseases of women and children, form the subjects of the fifth book. In this, the concluding section of the work, the management of women during pregnancy and labour, together with the means of preventing abortion, are fully treated of ; directions are also given for the choice of a wet nurse ; and the most approved Hindu methods of treating infantile diseases, and of warding off the attacks of evil spirits or devils, are described in detail.

We have, in the above notice, endeavoured to give our readers a general idea of the nature and scope of Dr. Wise’s Commentary. Of the learning and labour which our author has bestowed upon it we cannot avoid expressing our admiration ; and to all who feel an interest in what may be termed the antiquities of medicine, we feel pleasure in recommending it, as a work from the perusal of which they will derive much gratification.

(a) This vital humour must, therefore, be analogous to, if not identical with, the “ radical moisture” of Mr. Shandy ; the importance of which, in keeping the “ radical heat” within due bounds, is so conclusively proved in that gentleman’s “ *Tristra-pædia*.”

1. *Practical Observations on some of the Diseases of the Stomach and Alimentary Canal.* By JAMES ALDERSON, M.D., F.R.S., 8vo. London, Longmans. 1847. pp. 215; with 10 Plates.
2. *On Indigestion, and certain Bilious Disorders often conjoined with it, to which are added, Short Notes on Diet.* By GEORGE CHAPLIN CHILD, M.D. 8vo. London, Churchill. 1847. pp. 219.
3. *A Treatise on Diet and Regimen.* By W. H. ROBERTSON, M.D. Fourth Edition, Parts I. and II. 12mo. London, Churchill. 1847.
4. *On Dyspepsia; with Remarks in support of the Opinion that the Cause of this and all other Diseases affecting the general System is Vitiating of the Blood.* By J. B. STEWARD, M.D. London, Churchill. 1847. 8vo. pp. 106.

As a consequence of the artificial life which the greater part of mankind lead,—some from necessity, and others of their own free will,—indigestion, and the various derangements of the stomach, both functional and organic, to which it gives rise, are among the principal diseases which the physician has to treat. It cannot be wondered at, then, that treatises on these affections abound, and that medical men, looking for a means of bringing, or rather forcing, themselves into practice,—taking for their theme one or more of the Protean forms which indigestion assumes,—write a book calculated to catch the eye of the *bilious* public.

The *irregular* quack, also, trades largely on the maladies, both real and imaginary, of the stomach and alimentary canal, and sometimes without much disadvantage to his patient. Most hypochondriacal individuals, who expect the regular physician to cure them by medicines alone, without the aid of dietetic rules, will be found to adhere scrupulously to the hygienic treatment of the homœopathist (we beg pardon, the professor of the *natural treatment* of disease, as we should term him, were we to subscribe to the *ipse dixit* of one of our British Medical Reviews), or any other empiricist.

We have been led to make the foregoing remarks by a perusal of Dr. Alderson's work, which owes its birth to the author's "comparative leisure, consequent on a change of residence:" namely, from Hull to London. In large cities it very frequently occurs, that a physician acquires a name, and often most justly, for the treatment of a particular class of diseases, from having written on the subject: the chance of a similar success is too tempting to be overlooked, and therefore nume-

rous books, written with this view alone, and published at the author's own risk, are annually issued from the medical press; such works, however, bear their own peculiar stamp, and rarely escape the eye of the critic.

From the title of Dr. Alderson's book the reader would be led to expect a tolerably complete description of many of the diseases to which the stomach is liable; but the greater part of it is devoted to the consideration of cancer, or, as he prefers to term it, "carcinoma" of that viscus; a few "cursory observations" on functional derangements of the digestive organs being appended. The author is modest enough to declare, in his preface, that "he claims neither the character of a discoverer nor of a theorist, nor of a proposer of any particularly novel or specific plan of treatment." What, then, our readers may justly inquire, induced him to appear in print? To this question the only answer we can give is what we have stated in the preceding paragraph. We have read the book carefully through,—no light task,—and we cannot say that we have met in it a single novel view, much less a single practical hint, which would prove useful to the physician.

If a work possess any practical value, be it ever so little; or if the author, in writing it, appears to be actuated chiefly with the wish of benefiting his professional brethren, by imparting to them either some new views of medicine, or gleanings from his own experience, it has never been our habit to cry him down because his language may be occasionally obscure, or his grammar not classically correct; but when we meet with a work, to our judgment, published on other than strictly professional grounds, we feel it our duty to criticize the author's style as well as his material.

In Dr. Alderson's work we find numerous examples of obscurity of language (his meaning we have had, in some instances, great difficulty in arriving at), of peculiarity (we know not what else to call it) of style, of bad grammar, and of bad pathology. As we read the book we noted a few specimens under each of these heads; and, considering that the author was *formerly a Fellow of Pembroke College, Cambridge*, we are sure that our readers will be no less astonished at them than we were ourselves.

The following are but a few samples of the author's obscurity:—

"Ultimately, even liquids will not pass into the stomach, and the patient, having subsisted on his own fat, *at last dies, emaciated, of starvation.*"—p. 21.

“The periods, therefore, at which the vomiting returned after eating, *preceded by pain*, pointed to the interior of the stomach for the seat of the undefined fulness.”—p. 74.

“The same pain being occasioned by pressure over the part *which* he had always felt previously to vomiting.”—p. 87.

Speaking of the valvulæ conniventes of the colon, as a provision for accumulation, he remarks:—

“Still, supposing that nature is thus bountiful in protective supervision, we are furnished with no excuse to neglect scientific reasoning as to the best means to assist in averting the error, nor are individuals exempt from those continual duties, in regard to this important point in the preservation of health, which reason and experience make evident.”—p. 181.

This sentence, we honestly confess, is far beyond our comprehension. Take the following examples of the author's style:—

“I found him considerably *shrunk from* his former proportions, but not emaciated. His inspiration was rapid, and air was *taken in* by the nostrils, that is, he sniffed air into the lungs every now and then.”—p. 41.

“I have said that the disease is *obnoxious* to all situations in the œsophagus.”—p. 31. “The excess of pain at the pit of the stomach was *negative against* disease of the pancreas.”—p. 73.

“The symptoms gradually increased *upon* him.”—p. 57. “His symptoms gradually increased *upon* him.”—p. 62, &c.

“This fluid, after being vomited, and *at rest*, deposited a muddy sediment, like that *made* after rain in a macadamised road.”—p. 87.

“His apprehensions were so urgent that I *gave way*, to sanction a free cupping from the nape of the neck. *This*, with fresh aperients, subdued the head symptom.”—p. 104.

Speaking of the complexion in cancerous diseases:

“It consists in a certain dingy, sallow, exsanguinous, yet opaque, appearance; it is unlike the yellow tint of jaundice, or the opacity seen in some states of heart disease. The eye is sunken, the adnata pearly; there is a peculiar cast of countenance, expressive more of care and depression, than of dissatisfaction, and more of deep thought, than of peevishness.”—p. 195.

Bad grammar abounds throughout the book. Adjectives put for adverbs; for example: “from which four months *previous* the fungoid tumour had been removed.”—p. 63. Adjectives for substantives: “The *chief* of the disorganization was in the larger curvature.”—p. 68. “Owes the *chief* of its in-

terest.”—p. 191. Verbs active for verbs neuter: “The whole of the tube to this point *enlarges*.”—p. 99. “Sulphur taken internally soon *exhales* from the skin.”—p. 180. Sometimes a plural verb follows a singular nominative, and sometimes, on the other hand, a singular verb a plural nominative, thus: “Diarrhœa or dysentery *follow*.”—p. 99. “There *is* often morbid appetite *and* considerable thirst.”—p. 100. “*Local irritation* on the skin, as erythema and erysipelas in the lower extremities, sometimes *appear*.”—p. 102. “Decomposition or fermentation *take place*.”—p. 183.

The following examples of Dr. Alderson’s pathology do not require from us either note or comment:—

“Hydatid tumours also frequently point early, which evidences their character.”—p. 55.

“These two characteristic symptoms, pain and vomiting, are sometimes, though rarely, wanting. It is difficult to account for the absence of the pain. I can myself find no other probable explanation than the following: viz., that cancerous deposit, without ulceration, has been made in the course of nervous communication between the ulcerated part and the brain: the opposite exemplification of this is apparent when cancer has its seat amongst nervous matter and is ulcerated: here intense pain is the result.”—p. 76.

“A shivering fit, accompanied by delirium, marks the time when *perforation finds its way* through the coats.”

“This process of throwing out lymph, which is called instinctive, or by others preservative, is, in fact, more properly but a prolonged process of destruction. It occurs *only* in chronic disease, and where the constitution is in a failing state, and *never* in early life, and in acute disease, when such a restorative effort on the part of nature would be naturally looked for.”—p. 120.

Dr. Alderson has appended to his book coloured lithographs of the morbid appearances in some of the cases he details. They are, however, so badly coloured, that it is almost impossible to make out what is meant by them. We wish authors would be convinced, that badly or incorrectly coloured drawings are anything but an advantage to the reader; an uncoloured lithograph is, most generally, far more faithful, as is exemplified in the present instance, where the third plate,—the only uncoloured one,—affords a graphic delineation of the morbid appearances intended to be represented. We had a similar fault to find with Dr. Burrowes’ book, reviewed in our last volume.

We turn now, with pleasure, from the ungracious task which the sense of the duty we owe to our professional brethren has imposed upon us, to give a short notice of Dr. Child’s

treatise on indigestion. We do not remember to have ever read a medical book, which impressed us with a more favourable opinion of an author than this. Though not abounding in any very novel views of the subject, it contains the author's experience, for several years, of the treatment of the varied forms which indigestion assumes. The symptoms of more than 200 cases have been carefully tabulated, the results thus obtained judiciously analyzed, and important practical precepts thence deduced.

This is a book that does not admit of analysis; the matter it contains is admirably and clearly condensed, and is well deserving of a careful perusal. The following extract conveys a good idea of the author's style:

“ The regulation of the diet in indigestion is, in some respects, even more important than the medicinal treatment: thus many cases require for their cure nothing beyond a suitable regimen, while without it drugs will be of no avail. The obstacles which here oppose the practitioner do not usually arise from any difficulty in selecting a proper diet, but rather from the difficulty of getting patients to adhere to it faithfully. When habits of indulgence in eating and drinking have taken fast hold, they are not easily relinquished, and the progress of the cure is every now and then interrupted by some slight outbreak, or dietetic error. The most difficult class of persons to deal with, however, are, unquestionably, those who profess to know the peculiar nature of their stomach, and all that agrees or disagrees with it, although the perverseness with which individuals so circumstanced blame the wrong thing, has grown into a jest.

“ Dyspeptics are often unreasonable as to what may be in fairness expected from medicine; they are ready to follow prescriptions exactly, provided the customary good dinner is to be their reward, and their object in consulting the physician seems less for the purpose of being cured of indigestion than of being enabled to continue their luxurious mode of life. They are ingenious in finding excuses for indulging in a favourite dish; thus, if they have, on the remonstrance of their attendant, abandoned some article accused of producing acidity or flatulence, they are apt, if the promised good effects do not almost immediately ensue, to make a handle of the circumstance, and to argue, that, as abstaining from the kind of food in question does no good, so there can be no harm in again returning to it.”—pp. 204–5.

Of the fourth edition of Dr. Robertson's *Treatise on Diet and Regimen*, two parts only have been yet published. The author states, in his preface, that the work has been entirely re-written and its matter more than doubled in quantity. In the first part we are presented with an introductory chapter not contained in the former edition:—

“ On the origin of sporadic, endemic, and epidemic disease,—the influence of civilization on human health and the expectation of life,—the importance of information on the physical necessities of health, and the principal sources of disease,—and the evils which arise from the general ignorance of the public on sanitary questions, and from quackery, which is the child of such ignorance.”

So far as we are able to judge from the two parts before us, Dr. Robertson's treatise appears to be written in a light and popular style, and to contain much information on the subject of dietetics. We refrain, however, from offering any critical remarks on the contents, until the work shall be completed.

In a little book, made up of oceans of margin and waves of type, the title of which we have placed fourth on our list, Dr. Steward sets up a *public* claim to the treatment of dyspepsia, on the grounds of having been a sufferer from the disease, and of having cured himself:

“ The author's success, not only in his own case, but in dispensary as well as private practice, induces him to submit the following remarks to the consideration of the public, in the hope of further extending to others the relief he has effected in himself; for he may now, with truth, say that he is, and has for many years been, free from all the evils he has enumerated: he can eat, drink, and sleep like other persons, and no longer fears the moderate enjoyment of those social comforts which, whilst they renovate the strength and fit us for exertion, stimulate the sullen to gaiety, make the lively more cheerful, dissipate the cold formality which often enshrines talent, and, in the refinement which attends it” (what?), “ enables us to forget the animal necessity.”

Here are bright prospects to hold out to the London aldermen, and all other *bon vivant* citizens! The pleasures of the table may be for the future enjoyed without any fear of the after-consequences. They need never again

“ Defy
That which they love most tenderly,
Quarrel with minc'd pies, and disparage
Their best and dearest friend, plum-porridge,
Fat pig, and goose itself, oppose,
And blaspheme custard through the nose.”

Or, rather, they should court an attack of dyspepsia, for then they must consult Dr. Steward, who, if they be sullen, will make them gay; if lively, more cheerful; remove the shrine from their talent; and, best gift of all, enable them to enjoy the refinement of gluttony!

Our author is a humoralist, believing that “ the proximate cause of all diseases consists in some alteration in the force,

quantity, or quality of the circulating fluid;" and he thinks that the want of success, which has hitherto attended the treatment of dyspepsia, must be ascribed to the rejection of the humoral pathology.

We shall not offend the common sense of our readers with any account of the strange reasoning of Dr. Steward in support of his, in the present day, novel pathological views. We need only state that, in the commencement of his argument, he gives the reader a rather startling insight into his knowledge of physiology; for he says that the chyme is *one* of the component parts of the chyle, the former being converted into the latter by the action of the bile!—p. 33.

Notwithstanding the author's false reasoning and ignorance of pathology and physiology, we confess that we looked with some interest to his chapters on therapeutics, to learn the novel treatment of a humoral physician; and we can scarcely expect our readers to believe us when we tell them that Dr. Steward treats dyspepsia by attention to diet, the rule for regimen being, "to avoid everything which, when taken, produces uneasiness" (a rule, by-the-by, which would cure most dyspeptics by starving them to death), and by the administration of alteratives, purgatives, antacids, carminatives, and antispasmodics, as they may be required. Mustard-seed swallowed whole he also finds useful. In pyrosis he employs nitrate of silver; and, in convalescence, tonics. For drink he recommends water, but, when it offends the stomach (p. 60), he allows fresh beer, "perwisin," with Sairey Gamp, "that it is brought reg'lar and draw'd mild."

So much for novelty!

PART III.

REPORTS, RETROSPECTS, AND SCIENTIFIC INTELLIGENCE.

R E P O R T

UPON THE PATHOLOGY OF TUBERCLE.

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THE morbid product of which we propose a review is the most interesting as well as the most important with which the pathologist has to do, because the diseases which are its direct consequence have become, among late generations, so general, and are of such a fatal nature, that it may well be denominated the *blight* of mankind.

In former times the term *tubercle* had a much wider signification than at present, having been applied to all tumours of a tubercular or nodular shape; and even at no remote date, Dr. Baillie gave this name to the fibrinous tumours of the uterus: now, however, the term is applied only to those bodies which are the product of a peculiar tendency of system, which is essentially morbid in its character.

Perhaps there is no subject on which more minute observations, more talent and medical research have been employed, than on that of tubercle and tubercular disease; and still we find opinions the very opposite prevailing, even among those who may be considered the strictest observers; and these conflicting opinions, too, are upon that very part of the subject on which it would be most desirable to possess definite conclusions. We refer in particular to the proximate cause of tubercle, to which point, however, we shall return in a future part of this Report.

The "morbid tendency" to which we have referred as a necessary condition in the occurrence of tubercular deposits, has been designated by several terms, such as "strumous habit," "tubercular cachexia," and "tuberculosis;" and the "scrofulous diathesis" nearly implies the same meaning.

In the pathological discussion of this subject it would be out of place to dwell at length on the peculiar and various causes which

lead to the dissemination of this morbid state of system among the community. As it is with the heterologous production itself we have more immediately to do, the remarks which are to follow will be directed especially to that which presents phenomena characteristic of "tuberculosis," and which, for convenience of description, we shall continue to denominate "scrofulous tubercle."

True scrofulous tubercle is generally of a roundish form, whitish or whitish-yellow, and opaque; is friable and soft, consisting of various elements, but which, on microscopical examination, presents characters which may be considered somewhat peculiar, viz. :

1. An amorphous transparent stroma, resembling, in chemical reaction, coagulated fibrin. 2. Unorganized granules which are minute, varying in diameter from the 800th to the 1200th part of an inch, and are not unlike the albuminous granules of the blood. These granules do not always exhibit the same reaction with chemical agents, which seems to be owing to the period they have been deposited. 3. Cytoblasts or imperfectly formed cells, varying in size between the 200th and 500th of a line;—but never in our observations could we recognise a nucleus in any of these cells.

Of these three elements, the granules generally predominate, and indeed it seems to me questionable if the cells should be considered a proper ingredient of true tubercle, as they are frequently altogether wanting.

In addition to the fat cells and pus corpuscles, though accidental, are not unfrequently present; and if much inflammation has attended their deposition, they may differ in character and appearance very much from what has been just stated.

Laennec(*a*) described small transparent bodies, under the name of "miliary tubercles," as the first stage of tubercular deposit. Louis(*b*), in 1829, recognised the same bodies as the primary stage of true scrofulous tubercle. These "miliary bodies" of Laennec have since received a good deal of attention, and his views concerning them have been questioned. Bayle denominating them "miliary granulations," considered them bodies of a *peculiar* nature, and not analogous to tubercle; Broussais(*c*) as enlarged lymphatic glands,—but there is no evidence of lymphatics existing in the lungs to such an amount; Dardenville as the remains of old scrofulous tubercles; and Ravin as hypertrophy of the cartilaginous plates of the minute bronchi. Andral thought them minute air-cells filled with indurated fibrine, the result of a chronic inflammation, which seems their most probable nature.

These bodies do not, therefore, necessarily form the first stage of tubercle, as Laennec would have it, while it may be admitted that their presence in certain habits induces to true tubercular deposit. These miliary bodies have been found, both solitary and aggregated, in the intestines of persons who had died of phthisis, as also in other situations, viz., on the pleura, pia mater, &c., which would seem

(*a*) *Laennec, de l'Auscultation Médiate.*

(*b*) *Recherches sur la Phthisié.*

(*c*) *Exam. des Dict. Méd. 1816.*

to favour the opinion of their having some relation with true tuberculization; but that they are not necessarily connected with scrofulous tubercles is evident from the following reasons:—1. In organs where tubercles are found in all stages there may not be a trace of them (even in “acute tuberculation,” where time could not have elapsed to allow of their transformation). 2. If present, being but feebly organized, they are likely to be attacked with scrofulous inflammation, and thus undergo tubercular transformation.

Besides the bodies to which we have been now referring, Laennec described another epigenesis as a primary stage of scrofulous tubercle, i. e., the “jelly-like infiltration;” but Professor Henderson(*a*) has shewn that this matter has no connexion with scrofulous tuberculization, consisting, as it does for the most part, of epithelial cells and mucus.

The yellowish gray and opaque or true scrofulous tubercle may accidentally be deposited along with the inflammation just alluded to, or may even originate in the grey hepatization of pneumonia, which affection, indeed, is described by Louis as the grey *infiltration*, and considered (though erroneously) as a stage which would necessarily terminate in the deposition of the scrofulous tubercle. Later investigations, particularly those of Dr. Carswell(*b*), sufficiently establish the fact that true tubercle may be deposited *as such*, and quite independent of any of the morbid processes mentioned.

Laennec supposed that tubercles were in some way endowed with independent vitality, and that his miliary bodies became crude by appropriating some ingredients from the blood by way of nutrition, and that they enlarged by internal addition, i. e. *intusception*.

Andral denied that tubercles enlarged by intusception, but contended that they extended by *juxta-position*, from the fact of their being unorganized. More recent observation has confirmed the latter view.

The *changes* occurring in tubercular matter may be advantageously considered under the following heads: 1. Retrocession; 2. Advance.

1. *Retrocession*.—Tubercle does not necessarily advance to a stage of softening, as has been frequently asserted by some pathologists, but occasionally becomes converted in its early stage into a pulpy or pultaceous matter, or into a substance having the appearance of chalk; the latter is only an advanced stage of the former. These remains of tubercle are generally found encysted, the cyst consisting always of organized fibrous tissue, by which provision they are prevented doing further injury to the surrounding textures. In the bronchial and mesenteric glands tubercular matter frequently undergoes these changes.

Other opinions, however, have been held with respect to these cretaceous remains. Albus and Kolk(*c*) suppose the whole tubercle

(*a*) See North of England Medical Journal, 1842.

(*b*) *Patholog. Anatom.* fascic. i.

(*c*) *Observationes Anat. Patholog.* fascic. i. p. 35, *et seq.*

to become absorbed, and this earthy matter to be deposited in its site; Reynard, that in the case of the lungs the tubercular matter becomes expectorated, and this substance deposited in their cyst. This view, however, must be erroneous, since it has been frequently found in situations from which no expectoration could occur.

This putty-like matter has been shewn by Carswell to be the only remains of what had undoubtedly existed as tubercles; and it may not be out of place to quote from Dr. Alison, who made the subject of tubercle a matter of particular investigation, and whose authority on any subject of pathology is entitled to considerable weight. He says, speaking of the changes some tubercles undergo: "They gradually harden into cartilaginous and then into earthy concretions, and remain in an inert state for a very long time."^(a) This is an important practical fact, and shall fall under consideration in a future part of this article.

Small bodies of an *osseous* nature are occasionally found imbedded in the lungs, and are not unfrequently expectorated during life, but which have seemed to us to have been formed from the miliary bodies of Laennec, and not the result of any change occurring in the opaque, granular tubercle.

A very important question arises in connexion with the retrocession of tubercle, i. e. as to the possibility of its absorption.

Very considerable changes may, and frequently do, occur in the composition of tubercle after its deposition, but a true knowledge of its pathology is opposed to the opinion which makes this product capable of being absorbed as such.

Dr. Stokes does not at all touch upon the question of the absorption of tubercle. Dr. Alison, however, admits the possibility of this occurrence. The former gives a remarkable case of "the alternation of scrofulous action between the neck and the upper portion of the right lung," in a boy aged twelve years, who, after recovery from a succession of eruptive fevers, by which he was greatly reduced, became suddenly affected with glandular swellings on the right side of the neck. These increased rapidly to a certain point, but subsequently disappeared in about a fortnight, when he was attacked with a violent cough, with difficulty and acceleration of pulse. Both sides of the chest sounded perfectly well, but while the respiration was sound over the left lung and lower half of the right, it was totally absent over the whole right upper lobe. As the pulmonic symptoms were removed, the lymphatic swellings reappeared, and in less than a week had attained their former magnitude, the chest being completely relieved^(b).

2. *Advance*.—Laennec promulgated the doctrine that tubercles always underwent a process of softening commencing from the centre; but the opinion of later pathologists, and the views advocated in this article, are adverse to the universality of the truth of this occur-

(a) *Outlines of Pathology*, p. 187.

(b) *The Diagnosis and Treatment of Diseases of the Chest*, by W. Stokes, M. D., pp. 395, 396.

rence. Andral makes the softening most generally commence at the exterior, conceiving that the process depends upon the disuniting and separating of its particles by pus, effused in consequence of the presence of the tubercular matter as a foreign body.

Kolk(*a*) and Lombard(*b*) state that the softening may commence at any part of the tubercle, which is more probably the fact, for the reason that the inflammation and suppuration might attack any part of the areola of cellular tissue included in or surrounding the morbid matter. It may be stated here that Stark was the first who proved the non-vascularity of tubercle, a fact admitted by Andral, Carswell, and Alison. Kingston conceived that he had succeeded in injecting tubercles, but his description shews that his experiments were made upon the miliary bodies of Laennec, and not upon the true scrofulous tubercle; and even if the latter admitted the injection, it would not prove their own vascularity, but rather that such vessels belonged to the cellular tissue, in the meshes of which they were deposited.

Dr. Carswell has demonstrated that the morbid product under consideration is secreted on the *free* surface of mucous membranes; and when this occurs into the vesicles and minute bronchi, the deposit at first only occupies their inner surface, so that a space in the centre exists, into which the fluid moisture of the bronchi gravitates, which gives the tubercle a soft appearance in the centre, when examined at this stage; if, however, they become completely filled up, there can exist no softening, as the term is, in the centre, which now forms the stage of *crudity* of former writers. The tubercular matter continues to increase in amount, until irritation and ulceration ensue, and in this way softening will be found to have taken place toward the exterior of the tubercle(*c*).

The period at which the latter kind of softening takes place depends upon the acuteness of action. Louis conceived that it occurred in from two to forty days in acute cases; Home from fourteen to sixteen. In chronic cases it may not occur for months, or even for years, in which cases it generally takes place in detached masses, whereas in acute cases the softening involves the whole of what has been deposited. In the former case, or where there is softening of masses, the irritation caused by the pressure leads to the free formation of pus, and ultimately to a *breach of continuity* in the surrounding parts, by which means the tubercular matter frequently escapes into a neighbouring bronchial tube. These *cavities* extend by

(*a*) Op. cit.

(*b*) *Essai sur les Tubercles*.

(*c*) M. Lebert makes the softening depend upon the liquefaction of the transparent hyaline mass, in which the granular matter is embedded,—an assertion deserving of attention, as it is that of a gentleman who has studied this department of science with much care and success. See his excellent work, “*Physiologie Pathologique, ou Recherches Cliniques, experimentales, et microscopiques, sur l’Inflammation, la Tuberculisation, les Tumeurs, &c.*” — Paris, 1845.

the adjacent sound parts of the lung, degenerating and breaking down. Before any fistulous communication has taken place they may be distinguished from common abscesses by having no pyogenic membrane lining their inner surface.

Cavities, the result of the breaking down of tuberculated lung, present some peculiarities. Sometimes many small ones open into each other, when they have been called "anfractuous cavities," and are formed by a gradual tuberculization and breaking down of adjoining and successive portions of the lung. This continuous line of excavation has been known to extend from one extremity of the lung to the other (Laennec).

Bands or *bridles* are occasionally found traversing these cavities, and have been mistaken for vessels. Bayle seems to have fallen into this error. They sometimes *contain* vessels, though rarely. Laennec says: "In the few cases where I have found blood-vessels in these bands, they constituted only a small portion of their mass, and were for the most part obliterated."—*Trans.* p. 284. Louis met with five cases where vessels existed in these bands. In the winter of 1841 I met with an instance in the dissecting room, in which the band was traversed from either extremity by a vessel of considerable diameter. I have also known a phthisical patient dying suddenly of hæmorrhage from the lungs, and on examination after death, a band extending across a cavity of about the size of a hen's egg had broken across, and on a careful examination it was found that it had contained a considerable-sized blood-vessel, which had probably been the source of the hæmorrhage.

Tubercular cavities are seldom larger than an orange, and are most frequently situated in the upper and back part of the lungs. It is seldom that only one cavity exists, so seldom indeed, that the pathologist would suspect its real tubercular nature. It is true that very frequently we can only diagnose one before, but on examination of the lung after death several are found to exist.

It is the opinion of some, that the membrane lining these cavities secretes the pus expectorated so largely at this period; but the irritated bronchial tubes must afford a part of this secretion. It occasionally happens that bloody expectoration accompanies the existence of a cavity, when it may be inferred that the adventitious membrane has not been formed, and that the raw texture of the lung is the source of the hæmorrhage.

The vessels around the site of tubercular deposits are for the most part obliterated. (Stark, Guillot).

Several other *conditions* accompany the advance of tuberculization of the lung, as *adhesions* of the pleural surfaces, near the site of the foreign deposit. Van der Kolk found injection pass from the vessels of the lung through these adhesions, which explains the fact of the circulation going on to a certain extent in phthisical subjects, independent of the healthy action of the lung, part of the blood getting thus at once into the systemic vessels. A very important practical deduction

may be drawn from the foregoing condition, i. e. as to the utility of local depletion and counter-irritation, for these measures now act directly upon the diseased portion of lung. These adhesions are known to occur at a very early period of this disease; and not only this, but the muscles external to them become peculiarly irritable, a condition which the practical physician recognises among the number of his diagnostic signs(*a*).

Pleuritic *effusions* are also found as accompanying conditions, but only in the advanced stage. They have been found in one-eightieth of all cases. *Pneumothorax* is not common. Home found six in one hundred cases. It seems singular that, in cases of phthisis, this complication should be found more frequently on the left than on the right side of the chest. In eight cases Louis found seven on the left. Reynard collected forty cases, and in twenty-nine the pneumothorax was on the left side.

Chronic pneumonia almost always surrounds tubercular cavities, causing induration of the adjacent portions of the lung: the acute form is a rarer complication.

Seat of Tubercle.—The cellular tissue has generally been considered the peculiar site of this morbid product, but since it has been shewn that it is deposited by way of secretion, the mucous tissue, if entering into the composition of the organ affected, is, we are convinced from repeated investigations, in the case of the lungs, as Dr. Carswell says, “in general, either the exclusive seat of this morbid product, or is far more strongly affected with it than any of the tissues of the same organ.”

The matter has been found in the air vesicles and minute bronchial tubes, by Lebert(*b*), Nicolucci(*c*), and Mr. Rainey(*d*); and in more than one instance, we have satisfied ourselves of its presence in the pulmonary cells, when we could not discover any trace of the deposit in the cellular tissue of the lungs.

Numberless proofs have occurred to substantiate the truth of this view; thus tubercular matter has been found secreted from the mucous lining of the larger bronchial tubes, from that of the intestines, Fallopian tubes, and from that of the ureter by Professor Henderson.

In Cruveilhier's experiments, the globules of mercury injected into the lungs were found surrounded by tuberculous matter(?). This view of the anatomical site of this product, in the instance of the lungs, holds out the possibility, if not a well-grounded hope, of our being able to adopt such measures as may succeed in dislodging the matter from the air-cells, and so effect a cure in some cases; indeed, Sir J. Clarke, impressed with this hope, recommends a pecu-

(*a*) See Stokes on Diseases of the Chest, in a note at p. 398.

(*b*) See *Archives Générales de Méd.* 1845.

(*c*) Muller's *Archives*, Nos. 2 and 3, 1844; *Encyclographie des Sciences Médicales*, 1845.

(*d*) See a paper read at the Med. Chir. Society, March, 1845.

liar treatment in the early stage to procure this end; but how far it may be found successful remains for future experience to disclose.

We cannot rank with those who draw a distinction between the morbid tendency of scrofula and pulmonary tubercle; and we are inclined to think that Dr. Evans(*a*) has not been acquainted with the history of those patients' parents from whose cases he has arrived at this conclusion. Many authors of consequence recognise their identity (Clark, Andral, Canstatt, &c.); but we quote from M. Lugol(*b*) who has made this subject one of particular study: "The identity of scrofula and pulmonary tubercles is, in our opinion, most manifest; they have both an hereditary origin, and are equally general and fatal in the affected family. The two latter characters are in themselves sufficient to establish their identity; but we shall endeavour to render the fact still more evident by demonstrating, first, that scrofula has frequently a tubercular origin; second, that the two ordinarily co-exist in the same family; and third, that all scrofulous subjects have tubercles in the lungs.

"1st. More than half the subjects of scrofula have consumptive progenitors. Scrofulous diseases of all kinds invade a family without the operation of any other cause than the existence of pulmonary tubercles in one of the parents.

"So general is this fact, that in a ward containing eighty-four beds, we have constantly ascertained the existence of consumption in one or other of the parents of more than half the patients; and even this is below the real proportion, for a great many patients are utterly ignorant of the sanitary condition of their families; and in other cases the presence of consumption has been overlooked because it was not accompanied by its more manifest signs.

"2nd. The preceding observations are still further justified by the frequent coincidence of scrofulous diseases and pulmonary consumption in the same family. In scrofulous families children often perish from disease in the lungs; and again, in consumptive families, some of the members are carried off by various forms of scrofulous disease.

"3rd. Scrofulous children, that is, children who are regarded as *scrofulous* and not *tubercular*, are nevertheless as much the subjects of this deposit as those in whom tubercle has concentrated itself in the respiratory organs. The *natural death* of the scrofulous is by consumption; we might say, indeed, that they seldom die in any other way, for, in all forms of scrofula, death rarely takes place until after the invasion of the lung by tubercular deposit."—p. 48.

The microscopical examination of the blood in the tubercular cachexia has hitherto thrown but little additional light on the nature of those changes which may be presumed to have occurred in it previous to the deposit of the matter under consideration. No

(*a*) Lectures on Pulmonary Phthisis, p. 189.

(*b*) Researches on the Causes of Scrofulous Diseases, translated by Dr. Ranking.

alterations are observable in the globules, but we cannot, on that account, set aside the suspicion of the existence of a tubercular plasma in the circulating mass, particularly as these do not play a primary part in the processes of nutrition and secretion. The relations of the component parts of the liquor sanguinis (which is the source from which all the tissues are formed) to each other, are, for the most part, invisible; and the affinities which lead to the deposition of any heterologous matters are, perhaps, not traceable by the use of this instrument. But if it has not aided us in demonstrating the tubercular plasma in the blood, we owe it much in perfecting what we know concerning the internal nature of this epigenesis.

Nature and Composition.—Addison(*a*) regards tubercles as an accumulation of abnormal epithelial cells, which he considers formed from the colourless corpuscles of the blood. We have elsewhere stated that some tubercles consist entirely of granules; and in cases where tubercular matter is effused from other structures than the mucous, epithelial cells can have no possible connexion with them. Gerber(*b*) makes a distinction between *albuminous* and *fibrinous* tubercle, believing the former to be unorganized, the latter organized. This opinion must be considered very hypothetical until the point is settled as to whether tubercle is or is not organizable. In its early stage a tubercle consists of an amorphous cyto-blastema, nearly allied to albumen; and in some cases was found by Schwann(*c*) identical with protein. In a few instances we have obtained similar results with tubercular matter obtained before the process of softening had occurred. After this, other products appear, depending, probably, in some instances, upon the mode of softening; and in others, upon changes occurring in the tubercular plasma itself. Schwann(*d*) has shewn that the phosphorus and sulphur disappear during this process. The salts, which are proper ingredients of tubercle, are, for the most part, those of lime, and they vastly predominate should what we have called *retrocession* occur. M. Lebert(*e*) makes a strange assertion on this point, i. e. that the calcareous salts consist principally of chloride of sodium and sulphate of soda. Now the salts of soda are very soluble, and would dissolve so easily in the fluids of the body, that we cannot imagine their presence in a solid form for the length of time these remains are known to exist.

It is extremely difficult to obtain definite results, as well from the almost impossibility of obtaining the matter perfectly free from the tissues in which it is imbedded, as from the relative amount of its own ingredients, and the frequent admixture of pus.

100 parts of crude tubercle were found (by Thenard) to give

(*a*) Transactions of the Provincial Med. and Surg. Association, vol. ii. p. 287.

(*b*) General Anatomy of Man and the Mammalia. English edit. p. 305.

(*c*) *Physiologische Chemie*, vol. i. p. 197.

(*d*) *Physiologische Chemie*, vol. i. p. 199.

(*e*) Müller's *Archives*, 1844, p. 289.

98·15 parts of animal matter, and 1·85 of muriate of soda, phosphate of lime, and carbonate of lime. A trace of oxide of iron(*a*).

Lassaigne found tubercle of the liver to yield:

Animal matter,	50.
Phosphate of lime,	45
Carbonate of lime,	4
Salts soluble in water,	1

100(*b*)

Parts most frequently affected.—Louis' observations led him to support the principle, that in every case in which tubercles are found in other organs, they exist in the lungs also. Recent investigation, however, has discovered several exceptions to this, particularly in childhood; at which period of life tubercles of the bronchial glands seem to predominate.

A greater number of organs are generally affected in childhood, and cases of insulated tubercle at this period are very rare.

Tubercle of the bronchial glands has proved fatal while still confined to them, as recorded in some of Alison's cases(*c*).

Late authors have seemed to us to have too generally referred the phthisis of children to bronchial tuberculosis, for in almost every case which we have ourselves examined, tubercles were also found in the lung.

The following tables are borrowed from Lombard as to the relative frequency of tubercles in different organs in childhood and in adult age:

I.—In 100 young subjects—

	Cases.
In the lungs in	73
Bronchial glands	87
Mesenteric glands	31
Spleen	25
Kidneys	11
Intestines	9
Nervous centres	9
Cervical ganglia	7
Membranes of brain	6
Pancreas	5
Sub-peritonæal cellular tissue	5
Inguinal glands	3
Cellular tissue beneath the pleura	2
Lumbar glands	1
Submucous tissue of bladder	1
False membrane of pleura	1

(*a*) Andral's Path., vol. i. p. 519, Transl.

(*b*) *Journal de Chimie Médicale*, Novembre, 1831.

(*c*) See Edin. Med. and Surg. Jour., vols. i. and iii.

II.—In 100 adults, lungs not included—

	Cases.
In the intestines in	26
Mesenteric glands	19
Bronchial do.	9
Cervical do.	7
Spleen	6
Lumbar glands	4
Sub-peritonæal cellular tissue	4
Axillary glands	3
Glands of anterior mediastinum	3
Sub-arachnoid cellular tissue	2
Spinal cord	2
False membrane of pleura	2
„ „ of peritonæum	2
Intercostal muscles	2
Ovaries	2
Parietes of gall bladder	1
Liver	1
Cavity of pleura	1
Posterior mediastinum	1
Vertebræ	1
Ribs	1
Omentum	1
Uterus	1
Prostate	1
Sub-mucous tissue of bladder	1
Cerebrum	1
Medulla oblongata	1
Kidneys	1

In examining the preceding tables, the greatest difference is seen to exist as to the bronchial glands of children. Tuberculization of these stand as 87 to 9 as to the adult, or $9\frac{3}{4}$ more frequently.

Out of 152 cases of adult bodies which Dr. Cless(*a*) examined, eight only were found with tubercles in the bronchial gland.

Since the publishing of the above tables, various pathologists have added to our knowledge as to the tuberculization of particular organs, while they have for the most part confirmed the accuracy of these so far as they go. Dr. Green has drawn our attention particularly to the subject of tuberculization within the head, though I am not aware if that gentleman has commemorated any case where the deposit was confined to the brain or its membranes.

Barthez(*b*) and Billiet relate two cases of isolated tuberculosis of the brain, and one of the arachnoid.

Some authors affirm that *hydrocephalus acutus* is invariably connected with that state of the arachnoid which has been called tuber-

(*a*) Schmidt's *Jahrbücher*, 1845.

(*b*) *Traité Clinique et Pratique des Maladies des Enfants*.

culosis; but so far as our own observation has extended, we are not warranted in assenting to this opinion. We apprehend, also, that tubercular disease of the mesenteric glands is not so frequent as is generally supposed; and that the enlarged abdomens of certain children are not always connected with glandular degeneration. In two instances under our own observation, the children were supposed to have died from *mesenteric disease*, but on examination no such affection of those glands was found to exist.

Tubercles in the liver and spleen are rare in the adult, at least in this country, and are not recorded by any writer that we are aware of, as being ever isolated in either of these organs.

I am led to believe that tubercle is more frequently deposited in the spleen in tropical climates than in the colder latitudes, if I may be permitted to draw a conclusion from the few cases which have fallen under my own observation in India for the last two years. Of twenty-eight persons dying of consumption, I found this deposit in the spleen in nine cases; and in two other instances of patients dying of remittent fever, the spleen was the seat of tuberculosis; but in all of these cases other organs were also affected, and some of them much more extensively than the spleen.

In Lombard's table of young subjects, the pancreas is mentioned as having been the seat of tubercular deposit five times; Rokitansky, on the contrary, is of opinion that this matter is never deposited in this gland, nor in the salivary or mammary glands, nor thyroid body.

The false membranes of pleuritis are sometimes converted into tubercle. Drawings, illustrative of this very rare pathological condition (taken from cases) have, from time to time, been exhibited at the Dublin Pathological Society, by Dr. Stokes, and other distinguished members of that body; and several important facts, relative to the tuberculization of particular parts, will be found scattered through the Dublin Journal, especially some by O'Ferrall, Graves, and Law.

Tubercle is rare in the *fœtus*: Orfila and West have met with it, and a few cases are mentioned in Lloyd's book on scrofula. Husson and Chaussier also detail some instances. Dr. E. Kennedy, in the winter of 1839, exhibited to the Dublin Pathological Society the lung of a *fœtus* which had never breathed, containing great numbers of tubercles, both in the crude and softened state. It is rare during the first few months of life, and continues comparatively so up to the fourth year.

Lombard, in an investigation as to the frequency of tubercles during the first few years of life, at the "Hospital des Enfants Malades," obtained the following results:

In those children which died from one to two years, tubercles were found in one-eighth of *all*; two to three, in two-sevenths; three to four, in four-sevenths; four to five, in three-fourths.

Before puberty they become less common; after it more frequent; and so up to 40, though at this period not so common as between 4

and 5. It is still a popular error that the age of puberty is much the subject of tubercle, but all statistics prove the contrary. Andral has shewn that the male and female are differently affected as to frequency between puberty and the age of 40; that the former is more subject to this deposit, between the twenty-first and twenty-eighth year, while in the latter the greater frequency exists between puberty and twenty.

Tubercular diseases are not rare after 40.

As a general statement, it may be said that the female is more subject to tuberculosis than the male.

In the returns of this disease from Paris, an apparent exception exists, but the discrepancy may be accounted for by the fact that only one portion of the community was returned in these statistics.

Origin of Tubercle.—The occurrence of most diseases is in general to be referred to two classes of causes,—the remote or predisposing, and the exciting, or those which more immediately tend to their development. It is so in the case before us, and hence it is that to the truly practical physician those which induce the tubercular predisposition or cachexia are of paramount importance, with those which act more directly in causing the secretion of this abnormal deposit. Each have their share in the occurrence *at a particular period*, and it is well remarked by Sir J. Clark, that “when the person is little exposed to the exciting causes, the constitutional predisposition may be long present without any local affection, while continued exposure to exciting causes may determine the local disease when the morbid state of the constitution exists in a slight degree.”

Illustrations of the truth of this are afforded every day from the different classes of society and trades, according as the individuals are placed in circumstances which have direct tendencies in causing the deposit, or in such as are calculated to counteract its formation.

There are authors, and some of no mean repute,—M. Lugol(*a*), for instance,—who deny that tuberculosis is ever induced by previously diseased states, and that the frequent occurrence of tubercular diseases after attacks of measles, scarlatina, &c., is referable to any pathological condition of system which has been induced by the latter diseases; and state that this epigenesis is only the manifestation of a previously existing scrofulous diathesis, which the depressing agency of the latter diseases has only called into activity. Bouchut, on the contrary, believes that some diseases (and particularly measles) have a direct and natural tendency to induce the tubercular diathesis; and in his late work on diseases of children has very accurately studied the supposed connexion between this diathesis and previously existing diseases. The views of the latter writer are in accordance with those of the majority of pathologists in this country.

In the strictly *pathological* discussion of this product we are not permitted to pursue this interesting question at more length in this

(a) On the Causes of Scrofulous Diseases, translated by Dr. Ranking.

place, but it will be found amply considered in the various practical works of the day; and several valuable communications have lately been made to some of the periodicals, and particularly those concerning the *grinders* of Sheffield in Dr. Cormac's London and Edinburgh Monthly Journal. One point, however, requires notice, i. e., as to whether or not tubercle is the result of an *inflammatory* action. On no subject of pathology has there been so much disputation as on this, and the names of the most accurate observers are still arrayed against each other. Laennec opposed the inflammatory theory, stating that it was impossible for its advocates to conclude that the pneumonia was the cause of the tuberculization, rather than that the tubercles, acting as mechanical irritants, had produced the pneumonia. He argued also that morbid anatomy did not always discover traces of inflammatory action in persons who died of phthisis, and was of opinion that, when they were found co-existing, the tuberculization had preceded the inflammation in nineteen out of twenty cases. He adduced also, on this side of the question, the case of the scrofulous glands, in which he conceived tubercular matter might be deposited unaccompanied by any mark of inflammation. It may be remarked in passing, that it must be considered doubtful how much the enlargement of these glands in scrofula really depends upon the deposition of true tubercular matter.

Carswell has supported the negative side of the question with some ingenuity. He commences by stating that inflammation is not necessarily followed by the formation of tubercular matter, inasmuch as we do not meet with that deposit in organs after death which had been so affected; but it must be remembered that pus and lymph, which are the undoubted results of inflammation, do not necessarily *always* follow that action. He then states that tubercles are found in organs, the functions of which had not been observed to be deranged during life; but the same may be said of many slow, insidious inflammations which give rise to no symptoms to make them apparent during life. He farther ingeniously remarks, that "effect and cause are inseparable under similar conditions," but he here overlooks the important fact, that the effects of inflammation vary with the tissue affected and with the peculiarity of constitution; and that the inflammation which would lead to the formation of pus and lymph in one, may produce tubercular deposition in another of a different constitution. The inflammation which occurs in a scrofulous habit cannot be considered under "similar conditions" to that in a healthy one, and therefore we have no right to expect "the product to be always the same."

Dr. Baron, of Gloucester, says: "Tubercles are not the product of any species of inflammation, though it may attend their growth and modify the symptoms which they occasion." His views were founded on a very erroneous theory of the pathology of this epigenesis, for he conceived tubercles to be hydatids,—a theory which a correct knowledge of natural history sufficiently refutes. There were other notions held by this gentleman respecting tubercle which

I have not thought necessary to allude to, because they are not now supported by any pathologist, and we leave them in that oblivion to which more scientific investigation has consigned them. Other negative arguments have been advanced, founded upon the seat of tubercle in the lung, and upon other dissimilarities between pneumonia and tuberculization. The upper lobes are most frequently affected with tubercle, the lower with pneumonia,—*at least in adults*; but the inflammatory action may be distinct, so far as not occurring under similar conditions; and though pneumonia be a distinct and peculiar *disease*, it does not prove that tuberculization occurs independent of inflammatory action, as that may not amount to what is nosologically denominated pneumonia.

No one in so unqualified terms advocated the inflammatory origin of tubercle as Broussais(*a*); and certainly some of the cases he adduces are very plausible, though it is presumed he made the most of them to meet his favourite theory. The circumstances and situations of the soldiers he refers to may have been such as first to have induced the scrofulous diathesis, for there is no other pathologist who maintains that tubercle is ever deposited from a *purely* inflammatory action. Andral's *present* opinion is given in these words: "If the disposition to the formation of the new deposit is very strong, then slight local congestion of blood is sufficient to give occasion to it; wherever such congestion takes place the same product appears, or what is called the tubercular diathesis is produced. If this disposition is less strong, it is requisite for the formation of a tubercle that the congestion should be so considerable and so permanent as to amount to inflammation. But where there exists no such predisposition the most intense and longest continued inflammation will not produce a tubercle."

Dr. Alison(*b*) has very elaborately defended the inflammatory origin of this product, and has formed his conclusions both from cases under his own observation and from the experiments of others. His cases are arranged under two heads: first, those in which death was not caused immediately by tubercles, but in which they were found, on dissection, "so directly succeeding to the symptoms, and so closely connected with, or even passing by insensible degrees into the undeniable effects of inflammation," that he could not otherwise conclude than that their formation had been dependent upon it. The second class of cases consisted of those which had been seized with inflammatory symptoms, while apparently in good health, from some known adequate cause, which, subsiding slowly, ended in phthisis and death, but with little or no other appearance which could be considered either as the effect of inflammation *known to have existed*, or the cause of death.

He also adduces the experiments of Kay, which were similar to those instituted by Cruveilhier, and attended with the same results.

(*a*) *Examen. des Doct. Med.* 1816.

(*b*) *Edinburgh Med. and Surg. Transactions*, vols. i. ii. and iii.

The positive side of the question is maintained also by writers of recent date,—Bennet(*a*), Evans(*b*), and Sibson(*c*).

Nicolucci(*d*), Lebert(*e*), and Mr. Rainey(*f*), particularly, have very lately arrayed themselves in opposition ; the latter forming his opinion upon a minute and careful examination of the capillaries surrounding a mass of tubercular matter, which, he states, have a comparatively healthy appearance, as compared with those which have been engaged in the process of decided inflammation. The oft-appealed-to experiments of Cruveilhier, too, turn out to be fallacious, as Hasse(*g*) has proved that the substance surrounding the globules of mercury, which was supposed to be tubercular matter, was nothing more than a mixture of the exudation and pus globules.

Minute or microscopical research therefore is subversive of what we would otherwise infer from the history of this abnormal deposit.

For ourselves, we have long thought that authors have been hunting after a shadow, in endeavouring to settle the point in question. Believing as we do that tubercular matter exists in the blood of the scrofulous, in the form of a *tubercular plasma*, we are of opinion that it may be exuded in that condition of the capillaries in which, under other circumstances, fibrine would be effused. If the latter state be called inflammation, and it is only an excited state of nutrition,—then in the case of tubercular effusion the inflammation is a peculiar and abnormal one, and the product is also abnormal.

Curability of tubercular Disease.—The question of the curability of phthisis is one of very great importance, because of the immense mortality from this disease among the inhabitants of these islands. In early times, when *consumption* was considered simply as the result of a chronic inflammation and suppuration of the tissue of the lung, the affection was looked upon as curable, if met in proper time by suitable treatment. As the true nature of tubercle and its consequences became better understood, this opinion was relinquished and the very opposite substituted.

Broussais considered the disease curable, an opinion not contradictory to his view of the pathology of the deposit. Bayle was especially opposed to its curability in the early stage, though he admitted the disease might be prolonged for a very long time without proving fatal. Laennec was the first to announce, on *pathological* grounds, that tubercular cavities of the lung were susceptible of cure, i. e., by a process similar to that by which certain abscesses and other breaches of continuity cicatrize. The cases on which he founded the belief were those in which all the signs of tubercular deposit, and those which indicated the existence of a cavity, were present, and from which the patient recovered ; and after death a *cicatrix*

(*a*) Edinb. Med. and Surg. Jour. 1845. (*b*) Op. cit.

(*c*) Transactions of Provincial Medical Association, April, 1845.

(*d*) Op. cit.

(*e*) Op. cit.

(*f*) Papers read before the Medico-Chirurgical Society, March 25, 1845.

(*g*) Anatomical Description of the Diseases of the Organs of Circulation and Respiration, translated by W. E. Swaine, M. D., p. 328.

was found in the part of the lung corresponding to the situation in which the cavity was known to have existed.

Andral's observations were confirmatory of those of the distinguished pathologist now quoted, and he has recorded in his *Clinique Medicale* (tom. iii. p. 382) eight cases affording similar evidence. The process consists in the inner surface of the cavity, from which the tubercular matter has been evacuated by expectoration, taking on a more healthy action, and becoming lined with an adventitious layer of organized lymph, which assumes the character of a mucous membrane, and becomes continuous with the lining membrane of the bronchi, into which the ulceration had previously extended. In process of time this new membrane takes on other characters by passing into fibrous or fibro-cartilaginous tissue, which, possessing as it does, contractile properties, draws with it the adjacent parts of the lung, and contracts upon the excavation till its walls oppose and unite, when nothing remains to indicate the original tubercular deposit, but a linear or otherwise shaped cicatrix, surrounded by some puckering of the tissue of the lung.

We do not assert that every deposit of organized lymph met with in the lungs is the result of the healing up of a tubercular cavity, but those found in situations obnoxious to tubercular deposit, and in lungs where tubercles exist in different stages of advance, may fairly be presumed to have originated in this way. Occasionally, too, traces of tubercular matter are still found within these cicatrices.

It must be admitted, however, that, while there can be no doubt of the healing up of tubercular excavations in some instances, a permanent cure is but seldom obtained to the sufferer in this way, in consequence of the almost general coexistence of more extensive tuberculization; and when this desirable termination does result, it requires that the pathological condition of the system, on which the effusion of tubercle depends (i. e., that those affinities of the blood through which this abnormal plasma is formed), should not predominate over the healthy.

Boudet(*a*) has recorded that he met with fourteen cases within the space of one year, in which all the evidences of softening and of the presence of a cavern were present, which ultimately completely disappeared. Dr. Williams(*b*) mentions the fact as *sometimes* occurring.

A second mode of cure, which is presumed to occur at an earlier stage of the disease, requires notice, and it is not incompatible with our convictions respecting the pathology of this product. Every person in the habit of attending *post mortems*, and making the lungs objects of special examination, has been struck with the great frequency of calcareous concretions in these organs, and particularly in those parts which are known to be most obnox-

(*a*) *Comptes Rendus*, tom. vi. 1843.

(*b*) *Diseases of the Chest*, 4th edit. p. 192.

ious to tubercular deposition; and observers are unanimous in the belief that these are the remains of what undoubtedly existed as tubercular matter. The process seems to consist in the absorption of the animal matter which enters into the composition of the tubercle, leaving the earthy ingredients; for no pathologist has ever demonstrated the absorption of tubercle as such. Let the explanation be as it may, there can exist no doubt of phthisis undergoing a spontaneous cure in this way. Carswell has found these remains not only in the lungs but in the bronchial and mesenteric glands, and in those of the neck.

Dr. Bennet endeavours to prove that the cure of phthisis in the way here mentioned is a more frequent occurrence than is generally thought; and in a communication to the *Edinburgh Medical and Surgical Journal*(a) he supports that opinion from statistical data of cases examined by himself and others, which need not be recapitulated in this place, in many of which the existence of tubercle had not been suspected during life; and if this happy termination is as frequent a spontaneous occurrence as this gentleman would represent, the fact will inspire us with fresh hope and new expectations. During a period of six months, while acting as pathological assistant in the Edinburgh University, I noticed the presence of these cretaceous remains in the lungs of nine individuals who had died in the Royal Infirmary of other diseases.

I have no doubt that this mode of cure would occasionally be brought about by a judicious management of the patient at an early stage of the disease, i. e. by preventing or avoiding all those causes which tend to irritate the seat of the deposit, such as changes of temperature, hurried exercise; and, again, by avoiding those which remotely dispose to that condition of system which is of primary importance in the production of this deposit; and I am equally confident that removal to certain climates has been followed by this result. During a residence of some time at Malta, I had several opportunities of examining the point in question in persons who had been recommended to that island for the mildness of its winter and the salubrity of its climate, and am almost certain that in more than one instance the change in question, or a process equally salutary, must have taken place from the improvement of the health, and the disappearance of certain symptoms. I have the notes of the case of one gentleman in particular, who arrived in that place in the latter part of 1844. Before leaving England he had been obliged to give up his avocation as a clergyman, on account of repeated attacks of severe hæmoptysis, cough, dyspnœa, and night-sweats. On his arrival at Malta these symptoms were not much abated; and on examining the chest, all the signs indicative of tubercular deposition at the top of the right lung were present. The dulness on percussion extended from beneath the clavicle to the edge of the fourth rib. The resonance of the voice was dis-

(a) April, 1845, p. 406, *et seq.*

tinctly increased as compared with the opposite side; and the sounds of the heart were transmitted to the ear with increased intensity. There was a slight mucous rale in the region of the deposit. The same signs were perceptible in the supraspinous space of the same side. He remained in the island for about eighteen months; the attacks of hæmoptysis did not return, the night-sweats and dyspnœa soon disappeared, and after a residence of two months the cough was not complained of; the general health was very much improved, the appetite increased, and the power of active exercise without fatigue returned. The stethoscopic signs, however, continued almost the same; the dulness only extended as low as the *third* rib; the mucous rale was not so generally heard, but the other symptoms remained the same. He continued in this way, as we have intimated, for a period of upwards of a year, when he returned to England, and has since resumed the duties of his calling, which he has been discharging for some months, apparently with as much ease as if there was nothing the matter with the lungs.

My friend, Dr. Galland, has informed me, that he has frequently noticed the disappearance of all the symptoms of tubercular deposit (by this I do not mean incipient phthisis), with the exception of slight dulness on percussion over the original seat of disease, and a heightened vocal resonance; and that he has known these continue for years, and the patient apparently in the enjoyment of the most perfect health. I may return to this topic in another place at a future time.

These cretaceous or puttaceous remains are generally found encysted.

A third mode of cure rests upon the possibility of the expectoration of tubercle without any ulceration of the tissue of the lung, or the formation of any accidental tissue. This possibility Dr. Carswell founds upon the fact of tubercle being secreted on the free surface of mucous membranes. In the case of some of these the matter is easily and speedily removed, as from that of the intestines, while the structure of others (the pulmonary, for instance) is favourable to its retention; and, indeed, it must be considered very doubtful if a cure is ever effected in this way in the case of the respiratory organs, though it is with hopes founded upon this doctrine, that Sir J. Clark so strongly recommends the employment of emetics in the early stage of phthisis,—a practice which he considers “one of the most efficient means in preventing the localization of tuberculous disease.”

It would seem, at all events, that this disease is not necessarily of so fatal a nature as is generally believed, since spontaneous cures do occasionally occur; and it will be in studying how nature, in some instances, wards off the fatal issue, that we may hope to arrive at a more rational and a more successful treatment than the dictates of a blind empiricism have hitherto devised.

PROCEEDINGS OF THE PATHOLOGICAL SOCIETY
OF DUBLIN.

1. *Caries of the superior cervical Vertebrae; Destruction of the Body of the Axis; Paraplegia, and Retention of Urine.*—Dr. Lees presented a recent specimen of disease of the upper cervical vertebrae, taken from the body of a man *æt.* 35, admitted into the Meath Hospital on the 5th of March, 1845, with pains in all his bones, or, as he described it, “all over him.” He stated, that eight months previously to his admission he had been salivated by mercury for a venereal complaint; that soon afterwards he had accidentally fallen into a river, and that the pains from which he was now suffering had set in three months subsequently. He was not emaciated; the disease was considered to be syphilitic rheumatism, and he was directed to be treated with sarsaparilla and iodide of potassium. On the 8th he was observed to be very restless; his pulse was very quick, his respiration a little hurried, and he complained much of the pains in his chest, abdomen, and legs. On examination of the abdomen, Dr. Lees now discovered a tumour in the hepatic region, with tenderness to deep pressure applied in that situation, and which, he thought, was probably indicative of a sub-acute supervening on a chronic hepatitis. On the 9th the patient was much worse; in addition to his former symptoms, he had now paralysis of the lower extremities, and complete retention of urine. The urine, when drawn off, was very turbid, loaded with the lithates, and had an acid reaction. The patient, on sitting up, supported his head with both hands; and he now mentioned that during the previous night he had a sensation of something giving way, or cracking, in his neck, and he felt pain in the place to which he referred this sensation. The back of the neck being carefully explored, a hard tumour, painful on pressure, was detected at the upper cervical vertebra, close to the occipital articulation. In the pharynx no ulceration could be discovered, but only a patch of green mucus on it. A consultation was held with Messrs. Porter and Smyly, who agreed that the case was one of caries of the cervical vertebra. There was no paralytic affection of the upper extremities. On the night of Thursday the 13th inst. the patient vomited, after which he again lay down in bed; and in the morning, at six o’clock, it was found that he had died quietly during the night.

A complete *post mortem* examination could not be made, as the friends of the deceased insisted on removing the body a few hours after death on the same morning, but the cervical vertebrae were examined, and the parts obtained, which Dr. Lees now produced. The second vertebra was enlarged, and this had caused the prominence felt at the back of the neck. Mr. Ledwich, who made the exami-

nation, observed that the periosteum, on its spinous process, was thickened, and very vascular. The odontoid process still preserved its natural relation to the atlas, but the body of the axis itself had disappeared, its right articulating process alone being visible anteriorly, and a mass of grumous matter occupying the situation of the bone which had been destroyed. On laying open the vertebral canal, the dura mater of the theca vertebralis was observed to be very vascular, as was also the pia mater of the medulla spinalis itself; the redness, in both cases, was shewn to be persistent after washing. These appearances Dr. Lees demonstrated on the posterior aspect, and he then proceeded to point out the condition of the medulla spinalis: it appeared in this place to be softened in some degree, as compared with the lower portion of its course in the cervical region, but there was no trace of any pressure having been made on it. Dr. Lees having also pointed out the remarkable lesion already described on the anterior aspect of the vertebræ, remarked that this destruction of the bone could not be very recent, yet the patient had been walking about up to his admission into the hospital, only nine days before his death; he had, indeed, mentioned, that a month previously to his admission a similar tumour had formed at the back of his neck, and that matter had been discharged from it, but no trace of this could be discovered, nor was there any cicatrix in that situation. It was to be regretted, that, from the hurried manner of the examination, there was no opportunity of inspecting the condition of the brain.

Dr. Lees was of opinion that the immediate cause of death in this case was the displacement of the vertebræ in some sudden motion of the patient. He directed attention to the remarkable circumstance of there having been no paralysis of the upper extremities, while there was, on the contrary, complete paraplegia, with retention of urine, neither of which is usually referred to a lesion of the medulla spinalis in the cervical region. Sir B. Brodie, in a lecture at St. George's Hospital last year [1844], has referred to a paper by Dr. Baillie, in the Transactions of the Royal College of Physicians, London, in which that eminent pathologist connects paraplegia with cerebral disease. Paraplegia has been often observed to be accompanied by cerebral symptoms. The late Dr. A. Colles (in his Practical Observations on the Venereal Disease, p. 139) has given the case of a gentleman labouring under secondary syphilis, with an ulcer at the back of the pharynx, who coughed up a piece of bone, which, "on examination, proved to be a ring of the first vertebra, with on one side the half, and on the other one-third, of the articulating processes," which had become carious, and was discharged through the ulcer, yet he recovered, and survived six years, during which he married and had children. On the authority of that case we may therefore conclude that this lesion is not so absolutely incurable, so necessarily fatal, as *a priori* might be supposed.—
15th March, 1845.

2. *Ramollissement of the Inferior Portion of the Medulla Spinalis, Pa-*

raplegia, Retention of Urine, Inflammation of Bladder and Kidney.—Dr. Hutton presented a preparation and several drawings illustrative of a case of ramollissement of the medulla spinalis. The subject, a man æt. 36, of swarthy complexion, a sailor, was admitted into the Richmond Hospital on the 25th of November, labouring under paraplegia. It appeared that on the 3rd of November he had left Lisbon for Dublin in a ship laden with fruit; that on the 7th a storm arose which continued without intermission for three days, during which he remained on deck, and was subjected to constant cold and wet. On the 11th he was seized with severe pain in the lumbar region; on awaking next morning his lower extremities were quite numb, and he was unable to pass water. There being no surgeon on board, the captain gave him some aperient medicine, but from that time his urine was retained, and he had involuntary discharges of fæces. On the ship's arrival in Dublin he was brought to the Richmond Hospital; he then appeared much exhausted, and his voice feeble; pulse 60; respiration regular; intellect unimpaired. There was a large slough over the trochanter, on which he had been lying, and on his legs there appeared some traces of lupoid ulceration; another slough laid bare the sacrum, and the theca was exposed. His abdomen was swollen, and the figure of the distended bladder, reaching up to the umbilicus, was distinctly perceptible. His lower extremities were paralysed, flaccid, and insensible, and the want of sensation extended up to the umbilicus. The catheter was introduced, and a large quantity of high-coloured ammoniacal urine was drawn off. In four hours afterwards the bladder again became filled, and the operation had to be repeated. After three or four days vomiting came on; a little blood was thrown up once; the pulse advanced to 69 or 70, but the respiration was not oppressed until two days before his death, when bronchial rales came on, and he died on the 2nd of December.

The posterior wall of the sacral canal was completely destroyed, so that the theca investing the inferior portion of the cauda equina was exposed. Some sero-sanguineous fluid was discovered within the theca, which gravitated towards the lumbar region, and in quantity amounted to two drachms and a half. The medulla spinalis itself appeared quite healthy on its exterior, but on being divided extensive disease was discovered, extending from the cauda equina up to the fourth or fifth dorsal vertebra; throughout this extent the medulla was softened and disorganized, but the arachnoid and other membranes of the theca were of the natural appearance. Dr. Hutton was of opinion that the disease commenced below, at a point where the disorganization was greatest (about the second lumbar vertebra) and had from that extended upwards. The bladder was enlarged, and exhibited all the effects of intense inflammation; its mucous coat was highly vascular, and in many places had patches of lymph on its surface, on raising which, purulent matter was found beneath; in some parts the mucous surface appeared of a dark green colour; in others there were large spots of ecchymosis. [All these appearances were ex-

pressed in a drawing by Mr. Conolly, which Dr. Hutton now exhibited.] The kidneys were gorged with blood, and their pelves contained urine tinged with blood, of an ammoniacal odour, and mixed with flocculi of lymph. The intestinal tube was not diseased, only some slight increase of vascularity was observed in the duodenum; the stomach was quite healthy, the liver was engorged, and the lungs were free from disease. The brain was not examined, as there had not been any symptom that could be referred to it. The first symptom noticed by the patient was pain in the lumbar region; did this depend on effusion into the theca, or on the ramollissement of the medulla spinalis itself? There was no inflammation of the membranes, but the fluid was increased in amount. Another point of interest in this case was the sudden paralysis. When ramollissement of the medulla spinalis has been the cause of paralysis, it has usually extended gradually; in this case, on the contrary, it became complete in one night. There was here, also, no rigidity of the lower extremities; this corresponds with what some French pathologists have asserted, as to this being a character of cases in which the membranes are not inflamed. The absence of both sensation and motion was also remarkable, taken in connexion with the softened state of the medulla spinalis, the external portion remaining apparently sound. The cases by Messrs. Webster and Stanley, in the *Medico-Chirurgical Transactions*, vol. xxii., leave the question still dubious as to the functions of the anterior and posterior columns of the spinal marrow, although that of the anterior and posterior roots of the spinal nerve has been ascertained. On the condition of the bladder Dr. Hutton referred to the opinion of those who explain inflammation of this kind by supposing that the retained urine becomes alkaline, and then is capable of irritating the coats of the bladder; in this case the kidneys also were highly congested, and the urine in their pelves was mixed with purulent matter, indicating inflammation of these glands, which Dr. Hutton was inclined to refer, together with that of the bladder and the sloughing of the paralysed extremities, to the lesion of innervation with which the disease commenced.

5. *Endocarditis; Vegetations on the aortic and mitral Valves; Contraction of the left auriculo-ventricular Opening.*—Dr. Corrigan presented recent specimens exemplifying endocarditis. The subject from whom they were obtained, a female, æt 24, had good health up to her accouchement, five months ago, after which she became affected by a sense of constriction in the chest, cough, with difficulty of breathing, and expectoration, which was sometimes bloody: after some time her feet became œdematous, and all her symptoms underwent a considerable aggravation a month before her admission into the Whitworth Hospital, on the 12th of February, 1846. She had then a visible pulsation in the jugular veins, and effusion into the peritonæum had taken place. She died in the hospital on the 22nd of February.

When the body was examined, the lungs were observed to be

free from disease; the left auriculo-ventricular opening was contracted, and there were vegetations of lymph on the mitral valves: on the aortic valves there were similar vegetations.

Dr. Corrigan proceeded to remark on the extent of disease which, we thus learn, may occur within a defined period, in endocarditis; and adverted to Bouilland's opinion, that this disease commences by inflammation of the valves, to which he had referred at several former meetings. [*Vide* Proceedings of 20th and 27th April, 1844, and 12th April, 1845.]—14th March, 1846.

4. *Malignant Osteosarcoma at the Base of the Skull.*—Dr. R. W. Smith presented a section of a skull, as a specimen of a disease of the bone, which might be contrasted with that which had been so lately described by Dr. O'Ferrall. An old man, who made no complaint except of uneasiness in the head, deafness in the left ear, and inability to respire freely through the nares, was admitted into the hospital of the South Dublin Union. As polypus of the nose was conjectured, a catheter was introduced into the nostril, which passed freely through the inferior meatus. After he had remained two months, without any variation in his symptoms, he died suddenly of hæmorrhage from the mouth and nares.

On examining the body, there was found in the stomach a quantity of blood which had been swallowed. At the base of the skull was a malignant osteosarcomatous formation, within which was a cavity still enclosing a clot. This malignant structure was a new growth, which had filled the sphenoid sinus and the superior cavities of the nares, and obstructed the Eustachian tube of the left side. The basilar process of the occipital bone was destroyed, as well as the body of the sphenoid, the lower portion of which remained in a softened state: part of the ethmoid bone was also destroyed. The roof of the mouth was softened, but its form was preserved, as frequently happens when the bony palate becomes affected by malignant disease: this circumstance has been observed and described by Dr. R. Adams, in a case of malignant fungus of the antrum. The brain was sound, but the dura mater, at the middle fossa of the base, was beginning to be diseased.

This disease resembles the areolar cancer of bone of Cruveilhier (*Maladies des Os*). In the case which Cruveilhier describes, polypus was suspected, and an operation to extirpate it was attempted by Amusat, who proceeded till he had reached the dura mater, when it was found necessary to desist. The disease of which this is a specimen, is evidently malignant: the cancerous matter appears to be deposited in the diploe, and to cause absorption of the earthy part of the bone. In the specimen the bone is quite soft, and the cancerous fluid exudes from it on pressure.—21st February, 1846.

5. *Cartilaginous Degeneration of the Bones of the lower Extremity.*—Dr. O'Ferrall exhibited a recent specimen of a peculiar disease of the tibia, for which the limb had been amputated. The description was illustrated by several coloured drawings of this, and other cases. The subject from whom this was derived was a man æt. 27, a shoe-

maker : when a boy he had fractured his left thigh close to the hip ; it united at an angle ; two years afterwards he again fractured the same limb at a point a few inches lower down ; and he had fractured it twice more before he was twelve years of age. After this he had fractured the tibia of the same side, and subsequently several times fractured the femur and the tibia. He was admitted into St. Vincent's Hospital for his twelfth fracture, which was of the thigh, close to the great trochanter ; this was not attended by any unusual circumstance, and union was effected in the usual time. The repeated fractures had, however, produced a state of exceeding deformity in the left lower extremity. [This was shewn in a drawing of this patient, representing his appearance after the union of this last fracture.] The deformity was most remarkable in the leg, which was bent into a curve, the concavity of which looked outwards, and a part of the convexity overlapped the tibia of the opposite side. The inconvenience that this man experienced from the deformed limb in the exercise of his trade was such, that he was anxious for the amputation of the entire, or some portion of it ; but on consultation it was decided not to operate for mere deformity. This patient was anæmic, and had *fremissement* and *bruit musicale* in the usual situation in the neck ; chalybeates were exhibited with benefit, and he was discharged from the hospital. After a few months he returned, complaining of pain in the left tibia, at its most projecting part ; this pain was very severe, and, being most intense at night, completely destroyed his rest. On a consultation being now held with Sir Philip Crampton and Dr. Wilmot, it was agreed to amputate ; and the operation was accordingly performed a little below the knee, near the head of the tibia, the point which the patient himself was anxious to have selected. During the operation there was a considerable number of vessels requiring to be tied ; and in two hours afterwards there was a general oozing from the cut surface of the bone.

Dr. O'Ferrall remarked that the bone of the amputated limb presents appearances unlike those of any specimen of diseased bone which he had hitherto brought under the notice of the Society, and in fact which are quite novel to him. The horizontal section of the bone, parallel to that made by the amputation, exhibits at first view the appearance of a medullary canal surrounded by an elastic yielding material within the shaft ; but a longitudinal section shews that this is not the medullary canal, but a short *cul de sac*, the inferior portion of a cavity the upper part of which is contained in the upper portion of the bone. This cavity is lined by a smooth membrane resembling synovial. There is no trace of a medullary canal, nor is there perceptible any vestige of former fractures ; even the points at which they occurred cannot be distinguished. There remains only a thin outer shell of bone, encrusting a material like cartilage, without any spiculæ of bone intermixed with it. It has been examined under the microscope by Dr. Power, who finds it to be a fibro-areolar structure, with a sort of unciform processes in the interspaces, but

neither cells nor nuclei. From these characters it appears distinct from malignant structure, and it differs from osteosarcoma of either the benign or the malignant species. In the malignant osteosarcoma the bone is destroyed at the point of growth of the malignant mass, which grows out from it in the manner of a fungus; but in the present case the limits of the bone have not been transgressed by the morbid structure which is entirely included within it. [Here Dr. O'Ferrall shewed a drawing of an osteosarcomatous tumour in the left thigh of a female; and also a drawing of a section of the diseased bone.] In the benign osteosarcoma also the bone gives way; the growth is in the transverse axis of the bone, but is limited in the longitudinal. [Of this species Dr. O'Ferrall shewed a drawing, representing the left hand with one phalanx of the middle finger affected.] In the present case, the only bone of the foot which was diseased was the os calcis, which was soft, very vascular, and easily cut or broken down; as Dr. O'Ferrall demonstrated by making a section, and compressing it. He thinks it probable that the femur is in a condition similar to that of the tibia. The chance of final recovery depends on whether the disease be malignant or not, but as yet there is no evidence of any constitutional taint, nor is there any appreciable visceral affection. The results of the operation were perfectly satisfactory, and the health of the patient is better than it has been for years, whilst the removal of the limb has been a great advantage to him in working at his trade.—*November 17, 1846.*

During the past winter he fell again and fractured the stump, for which he was re-admitted to St. Vincent's Hospital, under the care of Dr. O'Ferrall. Union took place in about the usual time, and he left the hospital in good health. He was seen a few days ago, when he stated that he was perfectly free from all complaint, and as able to work at his trade as well as ever he had been. His appearance has much improved since the operation, and he has increased in flesh.

MEDICAL MISCELLANY.

Case of Popliteal Aneurism, cured by Compression in four Days.

By J. W. CUSACK, President of the Royal College of Surgeons.

Reported by S. G. WILMOT, F. R. C. S., Resident Surgeon to Steevens's Hospital.

JOHN BRADY, aged 30, of stout make, but not very healthy aspect, unmarried, and accustomed to much foot exercise; was admitted into Steevens' Hospital on the 14th April, 1847, under Mr. Cusack. He states that he never had syphilis, never was mercurialized for any disease, and has ever been temperate in his habits and in the use of intoxicating liquors. A pulsating tumour, of a fusiform shape, possessing unequivocally the characters of an aneurism, occupies the right popliteal space. In its long axis the tumour measures three inches; its centre, the broadest portion, extends across from the external to the internal hamstrings. Pressure made on any point of the femoral artery arrests the pulsation in the tumour; a very small amount suffices to accomplish this when exercised upon the vessel as it crosses the pubis. The pulsations are strong, equable, and synchronous with the ventricular systole. No *frémissement* is perceptible to the hand placed over the tumour, nor is any *bruit de soufflet* audible by the stethoscope. The parietes of the aneurismal sac feel solid, and cannot be compressed so as to empty it of its contents. The collateral branches about the knee are very large; one in particular, which crosses the internal condyle, is fully equal in size to the radial artery. The patient scarcely suffers any pain except after walking; even then it is but trifling. The chief inconvenience he complains of as arising from the presence of the tumour is stiffness in flexing the knee, and in walking. Sometimes he complains of coldness and numbness in the foot of the affected limb; to the hand the temperature is sensibly lower than that of the opposite side. There is no appearance of œdema, or congestion of the foot or leg, but he states that after walking the veins become swollen. The tibial and peroneal arteries cannot be satisfactorily felt. Stethoscopic examination discloses no abnormal indications in the region of the heart. Pulse 85, full; urine healthy, and skin cool.

The history which the patient gives of his case is as follows. Two months ago, while walking, he suddenly felt "something give way" in the situation of the right popliteal artery, attended by a throbbing sensation and slight pain. Upon examination of the part he discovered a pulsating tumour, about the size of a pigeon's egg; shortly after, the foot became cold and numb, but this condition did not last long. He applied poultices, liniments, and stupes, to the part, without advantage; and though the swelling gradually increased, the pain and inconvenience he experienced were so trivial

that he followed his usual occupation, which necessitated almost continual walking through the day. A week previously to admission, the stiffness in the knee having increased, he was induced to seek advice at the hospital, when he, for the first time, became aware that he laboured under a very serious disease.

The patient having been placed on ten drops of tincture of digitalis three times in the day, was enjoined to observe the strictest quietude, in the horizontal posture, for a few days. At nine o'clock on the morning of the 22nd April, Reade's pelvic ball and socket apparatus was applied on the patient by Mr. Cusack, and the pad adjusted so as to bear perpendicularly upon the femoral artery, as it passes over the pubis. A degree of pressure was exercised, sufficient only to diminish, without entirely interrupting, the current of blood through the vessel. No congestion of the limb followed the application of this pressure, but shortly afterwards the temperature of the leg and foot fell considerably. The patient was able to bear pressure on the same point for four hours; when it became painful, by regulating the screw which connects the screw-pad with the curved arm of the instrument, the pad was capable of being shifted to a small extent. By thus alternating the pad upon two points, within a range of about one and a half inches, uninterrupted compression of the artery was maintained, and a cure accomplished, without the aid of a second instrument.

On the 24th the tumour had increased greatly in solidity, and the pulsation was scarcely perceptible. Compression was now augmented, so as to remove altogether pulsation from the tumour. He was still able to tolerate pressure on one point for the same period as before, as long as the screw-pad was made to fall perpendicularly to the vessel: in proportion to the accuracy with which this was done, the necessary degree of pressure became decreased, and the pain less. No congestion of the limb resulted from the additional pressure. Health good; pulse 72.

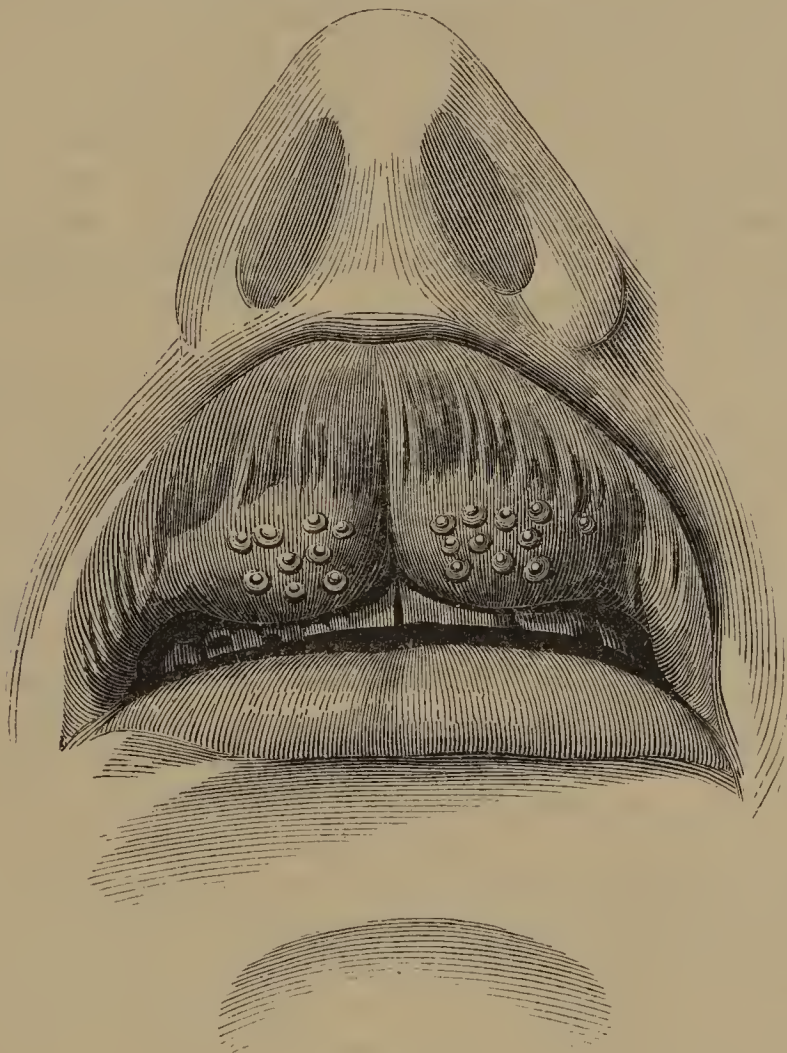
26th. At five o'clock in the afternoon, having been obliged to get up to stool, he took off the instrument, when, to his astonishment, he found that pulsation was no longer perceptible in the tumour. It was stated by one of the pupils who had charge of the case at the time, that he had detected pulsation in the tumour at eight o'clock that morning, while changing the point of compression. The vessels about the knee were observed to have become much enlarged; one ran along the tumour in its longitudinal direction.

May 3rd. The tumour has diminished greatly in its transverse diameter; the fingers can pass readily between its sides and the hamstring tendons. It feels perfectly solid.

29th. He was discharged this day. He can now walk very well without the assistance of a stick, can flex the knee perfectly, and suffers not the least inconvenience. The tumour in the ham is still to be felt, but is greatly reduced since last report.

Case of Enlargement of the Labial Glands. By W. R. WILDE, F.R.C.S.,
Surgeon to St. Mark's Hospital.

IN December, 1845, J. F., a man aged 20, with light hair and fair complexion, applied to me on account of a remarkable enlargement of the upper lip, the peculiar characters of which are well exhibited in the accompanying illustration.



He states that, about two years ago, his upper lip, which had been previously of natural proportions, began to thicken and enlarge, particularly on its inferior and inner surfaces. That, since then, it has gradually increased to the size here represented; that it has not been attended with pain, but that, within the last few months, he has a feeling of stiffness and fulness in it, as well as some degree of irritation, dryness, and chapping, from the exposure of the mucous membrane to the influence of the atmosphere, &c. He says that he has never suffered from glandular swelling or any scrofulous disease; never had venereal; and has always enjoyed very good general health.

Upon examination, I found the lower lip totally unaffected, as well as the extreme angles of the upper; but all the rest of the red border of this lip was immensely thickened, and so much enlarged

that, when the mouth was closed, it formed a large, projecting, red mass, not unlike a pair of ripe strawberries, the division between them being caused by the natural central sulcus of the lip. If these projections were allowed to remain unwiped for some time, a number of globules of a clear fluid formed upon the surface of the mucous membrane, as the artist has endeavoured to represent in the foregoing wood-cut. If one of these was removed, and the eye was kept steadily fixed upon the surface beneath, another clear drop of fluid was seen to exude from a remarkably small aperture in the mucous membrane. Squeezing the lip between the fingers, if the pressure was continued for some minutes, likewise caused these drops to form like a dew on the surface of the membrane. The membrane itself was rather more vascular than usual: where the drops exuded, it was particularly smooth and polished, but towards the edge of the lip it had become thickened, covered over with adhesive crusts, and cracked in several places. The external surface of the lip was natural.

As the young man was very anxious to be relieved of this deformity, I removed it in the following manner. Assistants having commanded the coronary circulation, by holding the angles of the lip, as in the operation for the removal of cancer of this part, I made an incision, with a small, sharp scalpel, through the mucous membrane, parallel with and about three-eighths of an inch from the edge of the lip, and about two inches and a half in length. By another incision, through the membrane, upon the dental surface of the lip, which was everted for the purpose, I completely included and dissected out the diseased mass, which, during the progress of the operation, I found to consist of a congeries of small globular bodies, nearly transparent, and about the size of advanced trout-spawn. There was scarcely any hæmorrhage during the operation, and any granules of the disease which were cut across, or adhered to the surface of the wound, having been completely removed, the edges of the incision were accurately adjusted, and sewed together by a fine silk ligature, after the manner of the continued suture. Upon shutting the mouth, the deformity was found to have been completely removed, and the edges of the lips met as before the supervention of the disease. A few hours after a smart hæmorrhage occurred from the surface of the wound, but it was checked by the use of tincture of matico, and occasional pressure, which the patient was able to effect for himself.

Having submitted the diseased mass to Professor Aldridge for examination, I received from him the following statement:

“I have examined the portions of the upper lip which you sent me, and can find nothing but the natural structures in a state of considerable hypertrophy. This increased nutrition appears not only to have affected the reticular cellular tissue of the glands, but likewise the fibrous structure of the cutis. You know how difficult it commonly is to perceive the fibrous structure of the true skin in the human subject; in this instance you will be able to perceive it with

the naked eye, and still more remarkably with a lens. This gives to the touch a leathery sensation, and I can easily understand that, if the induration proceeded a little further, the part would acquire a scirrhus hardness.

“The great development of the labial glands in this case renders their structure very easily studied. By introducing a bristle into the gaping excretory orifice of one, you will find that it passes, by a narrow neck, into the gland, which is oval and about the size of a swan-shot. This gland is what Müller calls “*folliculus conglomeratus*.” As might be expected, the blood-vessels proceeding to these glands are comparatively of a considerable size. I have counted thirty-six excretory orifices on the surface of one of the labial prominences that you removed, so that I can easily conceive the amount of projection which thirty-six of these glands, situated behind the mucous membrane, must have produced.

“You will find that, by carefully raising the cuticular covering of the surface, a tubular process of the epidermis can be drawn out of the excretory duct.

“The cellular tissue connecting the glands with each other is not indurated. Neither are the glands themselves indurated, though hypertrophied.

“You may question my employing the words ‘skin,’ and ‘mucous membrane,’ in this case, as synonymous; but in what consists their difference?”

The wound healed so kindly that the cicatrix could scarcely be perceived in a week’s time. Nine months afterwards this man had no return of the disease.

Cases of injurious Effects following the Use of Rye as Food. By W. COLLES, F.R.C.S., Surgeon to Steevens’ Hospital. Reported by Mr. V. A. BROWNE.

JOHN Hughes, aged 20, of low stature, with fair skin, light hair, and remarkably blue eyes, an unmarried labourer from the neighbourhood of Dunshaughlin, county of Meath, was admitted into Steevens’ Hospital for a disease in the nails of all his fingers and toes, on the 17th of June last. He gives the following history of his case: he, his mother, a woman aged 50, and his sister, a girl about 15, all reside in a small cabin on a plot of very low, marshy, and remarkably poor ground, in the locality already alluded to, and have generally lived in exceeding poverty and wretchedness. He states, that about four years ago he had a very bad fever, from which he recovered with difficulty, some months subsequent to which all his nails got perfectly black, festered, and some of them came off by a slow, gradual, and comparatively painless process; and that, while the old ones were being removed, new ones were growing beneath, so that he suffered but little inconvenience, and was not prevented following his work by the circumstance. About this period his food con-

sisted chiefly of potatoes and turnips; but his daily allowance of these was rather limited.

Since that period he has continued in perfect health till December last, when he was attacked with diarrhœa, from which, however, he soon recovered.

From the end of harvest until March last the food of this family consisted almost entirely of rye made into cakes with a little wheaten flour, and eaten three times a day with tea; this rye was grown upon the land already described, and was a portion of a remarkably poor crop, which, besides being very meagre in quantity, was in quality very bad, numbers of ears being totally devoid of grain, and many affected with the "smut" or ergot.

About the beginning of April he noticed his nails becoming purple; he complained of a peculiar sensation at the tips of his fingers, which made them feel as if they were frost-bitten, and he could not bear any cold in them, but they were not very painful, the feeling being a kind of prickling. In about a fortnight afterwards they began, he says, to fester; suppuration seems to have been set up all round their edges, and pus now oozed from under them. In about a month from the seizure of the disease several of the nails appear to have, according to his account, "burst" round the matrices, and then fell off one by one, leaving a granular, unhealthy suppurating surface beneath. Toward the end of May one of his toe-nails became similarly affected, and was cast off, and the disease then appeared spreading over all the toes of both feet. About the first of May he remarked his hair falling off, and also changing in colour. At the time of his admission, and for a few days previously, he complained of some feverish symptoms, pain in his head and stomach, a sense of weight about the chest; cramps, and loss of power in the legs and feet; he had also thirst, a white tongue, and loss of appetite: the bowels were regular, and his sleep undisturbed. Since he arrived in hospital, however, all these general symptoms have disappeared. He has been treated with bark, and the sores on the extremities of the toes and fingers dressed at first with poultices, and subsequently with black wash and other mild astringent lotions.

On the 4th of July he presented the following appearance and symptoms: The hair of the head has become remarkably thin and dry, and now presents a short, uneven crop of the natural fair hair, mixed with a quantity of perfectly grey, or white, the whole growing in a very irregular manner. The skin of the head is remarkably dry and scaly; the pupils of both eyes are more dilated than natural, but are fully sensible to the influence of strong light. The temperature under the tongue is 99; the pulse 82 and feeble. All the nails have come off the fingers, and the surfaces from which they have been removed have a healthy appearance. Thin, white portions of skin, like new nails, are beginning to appear upon several fingers. All the toe-nails have now become affected, some have been removed; those that still remain are of a deep purple hue,

with an unhealthy discharge oozing out beneath their free as well as their attached extremities, which latter portions, immediately adjoining the reflection of the cuticle, have been destroyed, apparently by a process of ulcerative absorption. The entire nails seem thinned, and when their surfaces are pressed upon with the finger the discharge oozes out all round, but there is not much pain experienced, and the burning sensation which he complained of as soon as the ulcerative process had commenced in the fingers, has not been felt in the toes. His health is very much improved since admission into hospital; he is at present taking large doses of the nitrate of potash in vinegar.

This case has not exhibited any symptoms of the present epidemic of scurvy, and there has been scarcely any hæmorrhage from the sores.

This man's mother has, he states, been slightly affected in the nails, somewhat similar to the mode in which he was, four years ago. She, he says, had not used so much of the blighted corn as himself or his sister.

Mary Hughes, aged 15, the sister of the man described in the foregoing case, whom she remarkably resembles in the cast of countenance, expression, features, and colour of hair and eyes, was admitted into hospital upon the 2nd of July, labouring under an affection precisely similar to the brother's, but in a somewhat mitigated degree. Her hair, both on the head and brows, presents the same characters; the nails of nearly all her fingers and toes have got the purple cast, become thinned, and are painful to the touch. The ulcerative process has commenced in all; seven have been already removed, and the rest are now in the process of being cast off. The toe-nails are not so far advanced. There are no other cutaneous appearances at present. The tongue is white and creamy; the pulse 99; the temperature under the tongue 100.

Bowels regular; sleeps badly; catamenia have not yet appeared. Her treatment has chiefly consisted of the acetated tincture of iron.

The man states that some of his neighbours who partook of the rye had an affection of their nails; and that the land upon which this rye grew has long been remarked for causing disease in the cattle which grazed upon it, cows and horses having lost their hoofs. The domestic fowl belonging to these people also died shortly after the rye was reaped.

[It is worthy of remark, that this peculiar affection of the *nails* and *hair* has been known in Ireland for upwards of 400 years. Some years ago, while arranging an Irish nosological table for the Census Report, we met with the word *Bruisingnidhi*,—a bursting of the nail,—in MS. No. 4-6, in the library of the Royal Irish Academy, a very curious ancient medical tract, which, Mr. Curry says, was written about the middle of the fifteenth century. The disease was attributed by the Irish writers to excessive grief or sorrow. The term is also to be found as a glossed word in the *Laebhar Breac*.—ED.]

Case of Removal of the Lachrymal Gland. By J. O. PEMBERTON,
F. R. C. S., Ballinrobe.

HAVING read in the Number of the New Series of this Journal for February, 1846, a paper on the extirpation of the lachrymal gland, by Dr. Halpin of Cavan, and finding but few cases recorded of diseases of that gland requiring its removal, I am induced, in the hope of adding somewhat to the general fund of medical and surgical knowledge, to publish the following case.

Mary Gibbons, aged 81 years, came to me in the month of March, 1843, with a large tumour protruding from the right orbit, inclining towards the external angle, and completely concealing the eye from view; the integuments covering it were of a purplish colour, somewhat resembling the tint of muddy port wine, and traversed by very large, tortuous veins. On raising up the tumour and elevating the superior palpebra, the eye could be seen, with the cornea quite flattened, as if sliced off with a knife,—caused, no doubt, by the pressure as well as friction of the tumour against it, in the movements of the eye-ball. The pupil was natural, and contracted on the stimulus of light. The span of the lids was small, which gave the eye a very sunken appearance. The globe was not protruded from the orbit, notwithstanding the size of the tumour. She stated that it commenced about ten years before in a small “lump,” towards the outer part of the orbit; that “it continued to increase gradually, until it grew over the eye,” the sight of which she lost, about eight years before. She could not raise the upper lid, except with her hand; and she says that she had only occasionally a sharp, darting pain in it, but, from its deformity, she had made up her mind to have it removed. Accordingly (assisted by Surgeon Robertson, of the 69th Regt.), I performed the operation. My first incision commenced at the junction of the frontal and nasal bones, and continued along the superciliary ridge, close to the eye-brow, extending to about half an inch or better beyond the external angle of the eye. I then made another incision from the point of my first, and carried it along the anterior surface of the tumour, at such a distance from the ciliary margin of the lid as to leave sufficient, but not too much, integument, for a superior lid, and by making the two incisions meet at their extremities, thus removed an elliptical portion of the integuments, but leaving the ligamentum palpebrarum untouched. Having freed the tumour from its external covering, I next very carefully separated it from the roof of the orbit with the handle of the scalpel, gently drawing it forward as I went along; but it was buried so deep in the orbit, I had to use great caution for fear of injuring the globe of the eye upon which it lay, and to which it was partially attached by adhesions of delicate cellular membrane: however, by a little care and management, I dislodged its deeply imbedded portion, and separated it from the conjunctiva, which was reflected on the portion of lid left, to which also it was

adherent, and removed it. There was not an ounce of blood lost, neither any vessel requiring a ligature wounded. I brought the edges of the wound together, and kept them in position by a few stitches of interrupted suture, and adhesive plaster, and applied water dressing and a bandage. She bore the operation remarkably well, and walked down street to her lodging. She stated she could now see every thing with the right eye, but not quite so distinct as with the other; this arose, I imagine, from the flattened state of the cornea. In a week's time, all the wound had healed, except at its external angle, near a suture, where a very small abscess formed; but it was discharged, and soon healed, leaving scarcely a mark of the extensive incision to be seen. In ten days she returned home, a distance of twelve or fourteen miles. In my mode of performing this operation I differed from those who had previously removed tumours from the orbit; and I think I rendered it simpler and quicker in its performance, with less dissection and pain to the patient, and leaving no deformity behind; for, in the second incision, I divided, and removed with the tumour, a quantity of loose and stretched integument, which, if left, would probably produce ptosis as the muscle could scarcely again regain (from its great attenuation) contractile power sufficient to elevate the lid afterwards. The tumour, which is the size of a large orange, was divided into two lobes, the smaller one lying buried deep in the orbit, the larger being external; when cut into, it was found to be composed of dense fibrous tissue, of homogeneous consistence, of a whitish colour, and had no appearance of blood-vessels; the superciliary ridge at its outer margin was completely absorbed, so that one could bury the top of the index finger in it. I saw this patient a few months since, three years after the operation; there was no mark to be seen; she could see with the right eye as well as the other, and there was no appearance of any return of the disease.

Case of Pneumothorax, with Empyema. By J. MOORE NELIGAN, M. D., Physician to Jervis-street Hospital. Reported by Mr. E. W. SULLIVAN.

THOMAS Lacy, aged thirty-three years, unmarried, by occupation a hatter, of spare habit, and emaciated from previous disease, was admitted into Jervis-street Hospital, December 4, 1846, complaining of cough, difficult respiration, and general debility. He states that about five months since, having been exposed to cold and wet, he was attacked with cough, accompanied by expectoration streaked with blood; this continued, with intermissions, for about three months, when an acute pain in the right side supervened, which induced him to apply for the first time in his life for medical advice; he was then blistered over the painful spot, but he did not take any medicine. Since that time he has been gradually losing flesh, and latterly he has been subject to occasional attacks of diarrhoea, and to night sweats. He

has also been unable to lie for more than a few minutes at a time on the left side.

Previous to this illness he enjoyed uninterrupted good health: his habits were always extremely temperate. He adds that, as far as he is aware, none of his family were affected with pulmonary disease.

His appearance on admission was as follows: anxiety of countenance; great emaciation; respiration laboured and hurried; projection of superior portion of sternum; no motion of the ribs or intercostal spaces on right side,—the latter being considerably bulged outwards; decubitus altogether on the right side, being unable to lie for more than a few seconds on the left. The measurement of the right side, at its greatest diameter, is one inch more than the left. The liver is pushed downwards. The following are the physical signs present: on the right side, anteriorly,—the patient sitting up in bed,—there is elicited, on percussion, in clavicular, infraclavicular, and mammary regions, a peculiarly resonant sound, as low down as the sixth rib, where it suddenly becomes dull; and, posteriorly, the resonance and dulness correspond, except over the scapula, where there exists comparative dulness; but, on getting the patient to lie on the left side, the resonance extends to the base of the right lung. On auscultation, no respiratory murmur can be heard over the right lung anteriorly; posteriorly, the respiration is bronchial in the right suprascapular and scapular regions. Well-marked amphoric respiration is to be heard in the right infrascapular, dorsal, and axillary regions, as also metallic pectoriloquy(*a*), and, at intervals, metallic tinkling. On succussion, a very evident splash is perceivable. The left side sounds naturally on percussion; but the respiration is somewhat puerile. The heart's action is normal, but its pulsation is felt in the left axillary region.

On admission, he was ordered an oil draught, and a fourth of a grain of muriate of morphia at bed-time.

December 5th, nine o'clock, A. M.—Had passed a good night, but the symptoms, as described yesterday, continue unabated; there is rather more turgidity of countenance, with increased dyspnœa.

He died at twelve o'clock this night, rather suddenly, having rallied much from a severe attack of dyspnœa, with which he was affected in the course of the day.

Sectio Cadaveris, fifteen hours after death. On making an incision through the centre of the ribs, on the left side, the right pleura was seen to extend five inches from the centre of the sternum, obliquely downwards, in the direction of a line drawn from the most prominent portion of the left clavicle to the fourth rib, and thence to the point of the ensiform cartilage, and was distended with air. The

(*a*) The term *metallic pectoriloquy* has not, I believe, been before employed to express the peculiar character of the voice, as heard on auscultation in pneumothorax: it appears to me to indicate well its remarkable tone,—the voice reaching the ear, as it were, through a brass tube.

heart was pushed over into the left axillary region, its apex (which was formed by the right ventricle) corresponding with the centre of the sixth rib. The right pleural cavity contained a great deal of air, and about sixteen ounces of a sero-purulent fluid, with fine flakes of lymph floating through it. The right lung was compressed into a small space, close to the vertebræ. It was connected to the diaphragm by a band of lymph, two inches long, and half an inch broad; and a similar band, three inches long, connected it laterally to the false ribs. The upper lobe was firmly bound down in its entire extent by numerous bands of organized lymph. The left lung was adherent, in several places, to the ribs,—many of the adhesions being evidently recent.

On removing the lungs from the thoracic cavity, the entire of the left lung was found to be minutely studded with miliary tubercles, without any appearance of softening. The three lobes of the right lung were intimately united together, and covered with the pleura, which was more than two lines thick. On its posterior aspect, and apparently at the lower edge of the upper lobe, was perceived a rounded opening, about the diameter of a crow-quill, covered with an epiglottis-like prolongation of lymph.

On inflating the lung through the right bronchus, the air passed freely out at this orifice. A glass rod being introduced into it, and a careful dissection having been made, it was found to communicate with a middling-sized bronchial tube, by means of a regularly organized canal or duct, six lines in length, but no appearance of a cavity, or even of softening, could be perceived either in connexion with it, or in any other part of the lung, though it was thickly studded with miliary tubercles.

The heart was covered with a thick layer of fat, but was otherwise in a healthy state.

All the abdominal viscera were in a perfectly normal state. The brain was not examined.

There are some features in this case which render it worthy of being recorded. In the first place, the fact of a patient labouring for some time under the combination of pneumothorax and empyema, and suffering so little as not only to seek for no medical advice, but to be able to follow the usual occupations of his trade, is somewhat singular; for, from his own account, he never consulted a physician but once, about three months before his death, at the period when an acute attack of pleuritis appears to have been caused by the perforation of the lung.

The case is also a good example of the value of the expectant, or, as some have recently chosen to term it, the *rational* method of treating disease; no remedy having been in this instance employed, with the exception of the application of a blister, until his admission into hospital, thirty-nine hours before he died.

The *post mortem* examination revealed appearances, sufficient, I think, to account for the rather sudden death. The perforation through the lung was covered, as is stated in the report of the case,

with an epiglottis-like prolongation of lymph(*a*). This acted like a valve, covering the orifice, permitting the air to pass into the cavity of the thorax on inspiration, but not allowing it to escape again on expiration. This, of course, could not occur, until the valve of lymph was of sufficient size to close the orifice completely, after which, every time the patient breathed, an additional quantity of air was forced into the right pleural cavity, and as it could no longer escape from thence, the left lung was of necessity more and more compressed. The perforation was, in the first instance, probably caused by tubercular deposition on the surface of the pleura, exciting ulceration through a small bronchial tube.

With reference to treatment a question arises, as to whether *paracentesis thoracis* would have proved of any service,—the more especially, as the physical signs were so well marked, that there was no difficulty in diagnosing the disease; but the short time that elapsed between the period of the patient's admission into hospital and his decease, and also the suddenness of his death, did not admit of the question of the operation being entertained.

Case of Lithotrity. By JOSIAH SMYLY, F. R. C. S., Surgeon to the Meath Hospital.

MARK WHELAN, aged 48, a silk weaver, applied to the Dispensary of the Meath Hospital, labouring under retention of urine. A gum elastic catheter was introduced with great facility, and the urine drawn off; in taking out the instrument it was perceived to grate along a stone. The patient was apprized of his state, and advised to come into the hospital. He entered it on the 29th of April, 1847.

He stated that his health has been bad for many years; but that about three years ago he first experienced pain in the left loin, accompanied occasionally with vomiting, and flatulent distension of the colon. He had also frequent attacks of urinary fever, viz., rigors, followed by heat of skin, headach, and profuse perspiration. He was affected by the above symptoms of calculus in the kidney for a year, when a change took place, and for the last two years he has had the rational symptoms of stone in the bladder. Some time ago he applied to another hospital, where he was sounded, but, no stone having been detected, he was treated for prolapsus ani, under which he still labours.

April 30th. The stone was measured, and found to be five-eighths of an inch in diameter. There was a good deal of irritability of the bladder; the urine was muddy, with a very heavy deposit of a tenacious muco-purulent substance at the bottom. The decanting the supernatant fluid and testing it gave an alkaline reaction, and on adding nitric acid a considerable quantity of a white precipitate (albumen) was thrown down. He was ordered dilute nitric acid, and tincture of hyosciamus in decoction of pariera brava.

(*a*) The preparation is preserved in the Museum of the Dublin School of Medicine, Peter-street.

May 3rd. Considerable improvement in his general health, and in the condition of the urine. The ropy mucus now bears the proportion of an ounce to the eight ounces of urine, instead of being that of nearly one-half; and the quantity of albumen, whether tested by nitric acid or heat, is merely sufficient to cause a cloudiness of the fluid.

May 26th. The urine having assumed a healthy appearance, I proceeded to break the stone with the screw lithotrite, having previously injected four ounces of water into the bladder. The stone was readily caught, broken, and two fragments crushed, when further proceedings were put an end to by the water escaping from the bladder.

27th. He had a severe rigor yesterday in the afternoon, followed by heat of skin and profuse sweating. The urine is high-coloured, and loaded with mucus; there is a small quantity of detritus entangled in the mucus.

29th. Has considerable difficulty in making water; on passing a catheter a stone is detected in the membranous portion of the urethra, near the neck of the bladder, which can neither be pushed back nor extracted by the instruments devised for the purpose, several of which were tried. A violent rigor coming on, all further attempts were desisted from; intending, when the constitutional symptoms permitted, to cut into the urethra and extract the stone.

31st. As the urine still passed pretty freely, the incision was postponed; a purgative was given, during the operation of which the fragment moved forward to the orifice of the urethra, from which it was extracted. It measured five-eighths of an inch in one diameter, and three-eighths in another. It is surprising how so large and irregular a mass of stone could pass through the urethra.

June 1st. Since the large piece has come away, several small pieces have been discharged; the patient is free from all annoyance, and is in good health.

11th. Not having passed any detritus since the 1st, and being free from the "rational" and "sensible" symptoms of stone, he was dismissed.

June 22nd. Came to the hospital to return thanks, and to say that he has not enjoyed so good health for the last fourteen years as since the operation.

The stone was analysed by Dr. Geoghegan, who sent me the following note of it: "I find the interior laminae of the fragment you sent me to be composed of oxalate of lime. The exterior one is a mixture of phosphate of lime with lithic acid."

Case of Irregularity of the Femoral Artery.—Fracture of the Femur from Necrosis; Hemorrhage; Death. By HENRY THOMPSON, F. R. C. S., Surgeon to the Tyrone Infirmary.

THE following case appears to me to be interesting, as affording an example of an irregularity in the course of the femoral artery,

rather a rare anatomical occurrence, I believe, and one which in the present instance proved to be of the most vital importance, as in consequence of it the patient lost his life.

James Gorimly, aged 9, of fair complexion and delicate appearance, was admitted into the Tyrone Infirmary on the 8th December, 1846, with a fracture of the right femur, immediately above the condyles. On examination it was found that the lower third of the bone had been in a state of necrosis for the previous six months, and that several pieces of sequestra had been discharged from two openings, one of which was situated on the inside, about two inches above the most prominent part of the internal condyle, the other on the outside of the external hamstring; through both of these openings the broken end of the diseased bone could now be very plainly felt: the lower fragment was drawn up behind the upper one, and projected in the form of a large tumour in the popliteal space; in front there was a hollow corresponding to the prominence behind. There was no great amount of hæmorrhage; the appearance and temperature of the limb below the fracture were natural, and the pulsation of the tibial arteries sufficiently distinct to prove that the popliteal, which seemed endangered by the position of the lower fragment, was uninjured, yet the boy seemed so debilitated by the previous disease,—and the possibility of his ever outlasting the protracted and complicated processes which the cure of such an injury required, seemed to me so improbable,—that I at once recommended amputation; this was opposed by another surgeon in whom his friends had more confidence, and I agreed to give him a chance of saving his limb, which was accordingly placed on the double inclined plane, the bones having been placed in apposition as well as possible. He appeared to be going on favourably for about a month, when hæmorrhage suddenly took place one evening, and before any one was aware of it he was lying in a pool of blood, which was trickling through the bed to the floor. As soon as assistance arrived, and the bandages were removed, the bleeding was found to have ceased, faintness having been produced. The blood was florid, and had issued from the outer and posterior orifice, which circumstances, together with the quantity lost in so short a time, led me to conclude that either the popliteal or some large arterial branch was implicated in the disease, and had been either perforated by some sharp spicula of bone, or opened by ulceration. I immediately mentioned the occurrence to the boy's father, who lived in the neighbourhood, remarking that, whatever doubt there might have been at first, there could now be none as to the absolute necessity of amputation to save his life. He would not listen to the proposal, however, so I told him his son would assuredly die in another attack of bleeding at no very distant period. The treatment was continued as before; and after about a fortnight, when he had in some degree rallied from the effects of the first bleeding, another took place in which he was very near dying. He recovered from it, however, and another symptom, (which, if it

had existed before, had escaped my notice), was now, for the first time, observed. This was a distinct diastolic pulsation, occupying the site of the fracture, commanded by pressure on the femoral artery in the groin, and unattended by any increase of swelling; a large artery, continuous with the femoral, could also be traced by its pulsation into the site of the fracture. It appeared to me quite plain that this was the vessel from which the blood came, and the idea of putting a ligature on it at a distance from the seat of the injury was frequently suggested to my mind; but the general health of the patient, debilitated to the last degree by previous disease and repeated hæmorrhage, the state of the limb below, which had become œdematous, and the existence of a great tendency to diarrhœa, induced me to conclude that any further interference with the case would only tend to bring our art into disgrace; so I left him, reluctantly, to his fate. A third attack of hæmorrhage, from which he with difficulty recovered, took place, and soon after a fourth in which he died.

Permission was given to examine the limb; and the vessel which had been traced along the inside of the thigh to the site of the fracture, was found to be the trunk of the femoral artery which ran in a direct line from the upper part of the thigh to the inner condyle, merely covered by the integuments and fascia, except in the middle third, where it was crossed by the sartorius. It sent a branch to the popliteal space, through the usual opening in the tendon of the adductor magnus; and having arrived at the inner condyle, it took a sharp turn backward, and passed under the gracilis and inner hamstring tendons to the ham, where it divided as usual. The whole vessel appeared to be increased in size, and particularly where it passed over the site of the fracture; its coats here were remarkably soft and brittle, easily breaking down under the forceps. It was very carefully dissected, and found adherent to the subjacent parts, where it passed over the broken bone; and on slitting it open on the opposite side, a large opening, with a smooth, funnel-shaped margin, capable of admitting the extremity of the little finger, presented itself, leading into the cavity, which contained the broken ends of the bone, together with several pieces of sharp-pointed sequestra. This cavity communicated with the external openings. The remainder of the femur, up to the trochanter, was quite red in colour, from the number of enlarged vessels it contained; the periosteum was thickened, softened, and very loosely attached to the bone, and the muscles were all glued together by effused lymph; there was no attempt at union in the broken extremities of the bone. The fracture had taken place at the junction between the shaft and the epiphysis, and the separated surfaces looked just as they might have done at the moment of separation.

SOME NOTICES OF THE IRISH MESMERISTS OF THE
SEVENTEENTH CENTURY.

GREATRAKES, COOK, AND FINAGHTY.

By R. R. MADDEN, M. D., M. R. I. A.

COLONIAL SECRETARY IN AUSTRALIA(*a*).

THE first person in this country who performed cures by stroking patients with the hands, is commonly supposed to have been Mr. Valentine Greatrakes, who flourished in the reign of Charles II. That supposition, however, is erroneous; a much more remarkable performer of this kind figured in Ireland in the troubled times of the Commonwealth, as well as after the Restoration. An account of his "wonder-working practices" exists, drawn up with great care and critical acumen by a contemporary having a personal knowledge of the man, his pretensions and performances; indeed, it would be difficult to find, even in the Critical Dictionary of Bayle, a subject, curious in its nature, or for the authenticity of the testimony on which the facts relating to it are supported, treated with more acuteness or subjected to a more searching inquiry.

In the following notice of it some interesting particulars and remarkable statements of facts in relation to practises analogous to those of modern animal magnetisers, will be laid before the reader, and it is for him to make his own deductions from them.

It may be well to state that this account of the performances of Greatrakes and his precursor is given without any intention of furnishing arguments either for or against the belief in mesmerism.

Those who set about building up systems before they have collected sufficient materials for the projected structure, begin at the wrong end of their undertaking; and, perhaps, the disposition to demolish everything newly raised, from a fear of novelty that exaggerates defects, may lead to the untimely end of beginnings that might, possibly, have grown into something good or useful, had the work proceeded.

In things that are strange and new, every failure in the performance of them is accounted by some persons a proof of impos-

(*a*) [It is our intention not only to continue our series of medical biographies, but also to give, from time to time, some notices of rare Irish medical works, as well as accounts of Irish medical manuscripts, of which the Royal Academy and the University possess so many valuable specimens. We likewise purpose devoting an occasional chapter to the record of some of the superstitions connected with medicine, and would gladly receive any information on this subject which our country friends can afford us. On the present occasion we avail ourselves of the peculiar knowledge and ability of our distinguished countryman, already so favourably known to science, literature, and humanity, to present our readers with some notice of a subject partly medical, partly superstitious, and partly mesmeric.—ED.]

ture, and in others a great number of failures fail to excite any suspicion of the power or probity of the performer. In debating societies, the question, exceedingly vexed and perplexed by much discussion, whether Cromwell was a hypocrite or a fanatic, remains always to be disputed and never to be resolved. The fact is, those who are the dupes of their own zeal, as their credulity increases, become unscrupulous with regard to the means they employ to acquire notoriety, to inspire confidence, and to lure others into their opinions, real and professed.

This was essentially the case with a late very eccentric lady, remarkable for her opinions respecting the occult sciences! "Hypocrisy," says Hume, "quite pure and free from fanaticism, is perhaps as rare as fanaticism entirely purged from all kinds of hypocrisy." Of other kinds of enthusiasm and imposture, as much may be said. It is rare to find one quite pure and free from the other, and the fervour of the former entirely purged from all mixture of the latter. Evident attempts to deceive may justly bristle up all the faculties, and put reason on its guard against imposition; but sound criticism will scrutinize with patience all subjects and phenomena presented to it, and even where there is much to excite suspicion, censure, or disgust, will leave nothing, however ill-accompanied, unnoticed, that has any claim to attention, or right to a candid judgment.

The account of the career of one of the "performers" referred to, stands peculiarly in need of those observations.

Before entering on the subject of the first wonder-working non-professional practiser of the healing art I have referred to, the principal circumstances that are known of Greatrakes require to be briefly noticed. He was born, by his own account, in 1628, at Affane, in the county of Waterford; educated in the free school of Lismore; and "perfected his studies in humanity and divinity in England," in the house of his maternal uncle.

The breaking out of the rebellion had caused the flight of his family, and the embarrassments of the latter led to his return to his native land. Afflicted at the deplorable state of the country, and disgusted with the unnatural differences then existing, he retired from the scene of strife and sought seclusion in the Castle of Cappoquin. "There," he says, "I spent a year's time in contemplation, and saw so much of the madness of the world that my life became a burden to me, and my soul was as weary of this habitation of clay as ever a galley-slave was weary of his oar." In 1649 he obtained a commission in Lord Broghill's regiment, then on service in Munster; and in 1656, when a part of the army was disbanded, he retired to his estate at Affane, and shortly after was appointed a justice of the peace. About 1662, when he was thirty-four years of age, he says he had "an impulse, or a strange persuasion in his mind (of which he was unable to give any rational account to another), which did very frequently suggest to him that there was bestowed on him the gift of curing the king's evil."

This conviction he concealed for some time, but at length communicated it to his wife, who endeavoured to persuade him it was "some strange imagination;" whereupon he made his first experiment in her presence on a youth afflicted with the evil "grievously in the eyes, cheek, and throat."

"Then I laid my hands on the places affected, and prayed to God, for Jesus' sake, to heal him, and bid the parent bring the child two or three days afterwards to me again, which accordingly he did, and I saw the eye was almost quite whole, and the node, which was almost as big as a pullet's egg, was suppurated, and the throat strangely amended; and to be brief (to God's glory I speak it), within a month discharged itself quite, and was perfectly healed, and so continues, God be praised."

He now proceeded on his career of healing by means of prayer, friction, or stroking the affected parts, and his fame extended over the country and even beyond its shores.

In his own account of his proceedings after his first return from England, he mentions having lived in a state of seclusion for a year, in the Castle of Cappoquin.

We find in Smith's Waterford a very curious account of Robert Cook of Cappoquin, a kind of Pythagorean philosopher, who, "for many years before he died, neither eat fish, flesh, milk, butter, &c., nor drank any kind of fermented liquor, nor wore woollen clothes, or any other produce of an animal, but linen. This man had a considerable estate in this part of the country. During the troubles in King James's time he removed to England, and lived sometime at Ipswich, but returned to this country, where he died about the year 1726."(*a*) In 1691 he published a very remarkable paper in the form of questions and answers respecting his tenets, wherein, giving his reasons for the customs he adopts and the faith he holds, he calls himself "a Christian and a Protestant," whose religion it is "to fear God and to keep His commandments,"—"to abhor evil and to do good, and have fellowship therein with all in every sect, or gathered or scattered people,"—"to hearken to the Spirit of Christ, which is the law of life in man," "the divine swift witness," which reproves for sin and overcomes all evil inclination: to follow the example of James the Just, that holy apostle Eusebius writes of, "the brother of our Lord, who eat not flesh nor fish, nor drank wine, nor used woollen clothes, but linen;" "which cannot give any just man offence;" the object of it being "to keep out of wrath and violence," and to avoid things like "wine and strong drink, which are hot in operation and intoxicating," and, as he thinks, "needless as tobacco to him," finding water, bread, and vegetables, most healthful, and linen and other issues from vegetable fibres "cleanest and wholosomest;" and thus to free himself "from most of the cumbers, labours, and toils, both of body and mind, a few things being sufficient in this way of

(*a*) The Ancient and Present State of the County of Waterford. By C. Smith, M. D. 8vo. Dublin, 1774, p. 370.

living, and bringing easily into contentedness and true thankfulness to God."

This remarkable man lived to upwards of fourscore years,—his opinions were refuted by the Athenian Society, and Smith disposes of them more contemptuously than he was justified, perhaps, in doing. Cook was not above fifteen or eighteen years younger than Greatrakes. It is probable the opinions of both were derived from a common origin.

In 1665, at the request of the Earl of Orrery, Greatrakes went to England "to try his hand on the head of the Lady Conway, of Ragley, in Warwickshire," who had long laboured under some cerebral affection. He remained at Ragley some weeks, and totally failed in his efforts to cure or relieve that lady; but "several marvellous cures performed (in Warwickshire) by the stroking of the hands of Mr. Valentine Greatrakes," are related by Dr. Stubbes, a medical practitioner of Stratford-upon-Avon, in a letter containing an attestation of several other cures by "the miraculous conformist,"—as the poor Irish gentleman was called,—given by Mr. Foxcraft, M. A., a Fellow of King's College, Cambridge(a).

In Stubbes' letter, he speaks thus of the performances he witnessed: "filling with admiration the most learned and suspicious beholders. In truth, they are such that he is not at all obliged to the ignorant for the esteem he hath acquired, nor is it possible for the most tender or superstitious and censorious zealots to destroy his reputation. He is a man of a graceful personage and presence; and if my phantasy betrayed not my judgment, I observed in his eyes and mien a vivacity and sprightliness that is nothing common."

The writer proceeds to describe him further as a man of good life, of benevolent principles, "conforming to the doctrine and discipline of the Church of England, yet without that censoriousness whereby some signalize themselves," modest and humble, thinking well of others, and "seeming by his faith and by his charitableness, to include some grains of the golden age, and to be a relic of those times when piety and miracles were sincere."

In his attempts, however, to give a natural solution of most of the cures effected by Greatrakes, he makes mention of his long and continued frictions from one to two and three hours; and Dr. Smith, in his *History of Waterford*, reminds his readers of Bacon's observation in his *History of Life and Death*,—that motion and warmth (of which true friction consists) draw forth into the parts new juice and vigour, and conduce much to longevity. "How far the imagination" (in those alleged cures), he adds, "might contribute to the cure, is uncertain."

The fame of Greatrakes reached the court of Charles II., "who invited him to Whitehall, to exhibit his powers." The Earl of Arlington was the bearer of the King's commands. The merry

(a) *The Miraculous Conformist, or an account of several Miraculous Cures performed by Mr. Greatrick.* Oxford, 1666. 4to.

monarch might have been somewhat jealous of the renown of a successful rival in the practice of manipulating patients for the cure of scrofula. One of His Majesty's first public acts after the Restoration was "touching for the evil," which Evelyn thus describes: "July the 6th, 1660, His Majesty began first to touch for the evil, according to custom, thus:—His Majesty sitting under his state in the banquetting house, the chirurgeons cause the sick to be brought or led up to the throne, where, they kneeling, the King strokes their faces or cheeks with both hands at once, at which instant a chaplain in his formalities says, 'he put his hands upon them and he healed them.'" This the good old Evelyn details in his usual quaint, quiet manner; and having described the patients getting a piece of money strung on white ribbon put round their neck by His Majesty, he adds: "the chaplain, each time the King put on one of those ribands, repeated: 'That is the true light who came into the world.' The Gospel was then read, prayers for the sick offered up, a blessing pronounced, and the King washed his hands after having stroked above six hundred."(*a*)

Greatrakes undertook the journey to England without expectation of fee or reward; and after he had been at the palace of Whitehall, where it does not appear he attracted much attention, he took up his abode in Lincolns-Inn-Fields, "where incredible numbers of all ranks and sexes flocked to him respecting the restoration of their health."

"All he did was only to stroke the patients with his hands, by which all old pains, gout, rheumatism, and convulsions, were removed from part to part, to the extremities of the body, after which they entirely ceased; which caused him to be called the stroker: of all which he had the testimonials of the most curious men in the nation, both physicians and divines."(*b*)

In the memoirs of Lord Orrery, in manuscript, *anno* 1669, cited by Harris, Mr. Love states that Greatrakes failed to relieve him of a pectoral and rheumatic disease, but he was witness of his curing the falling sickness, beyond credit; and further, that the Royal Society, and other modern philosophers, not able to dispute the fact, found words to define it, and called those strange effects "a sanative contagion in the body, which had an antipathy to some particular diseases and not to others."

In the Philosophical Transactions, No. 256, p. 332, the celebrated Ralph Thoresby gives several remarkable instances of cures effected by Greatrakes. He mentions the practice adopted by him in the case of his own brother, suffering from violent pain in the head and back, "who obtained immediate ease to his head, by the former only stroking it with his hands; he then fell to rub his back, which he most complained of, but the pain immediately flew from his hand to the right thigh, thence he pursued it with his hand to his knee, from thence to his leg, ankle, and foot, and at last to his great toe. As it

(*a*) Grammont's Memoirs, p. 435.

(*b*) Smith's Waterford, p. 366.

fell lower it grew more violent, and when in his toe it made him roar out; but upon rubbing it there it vanished." He gives another case, of white swelling of the knee, of six or seven years' standing, also cured. "He stroked both the knees of the patient, and gave her present ease, the pain flying downwards from his hand till he drove it out of her toes, and the swelling in a short time wore away, and never troubled her after."

He gives a third case in the same Transactions, of a person cured of deafness and pain in the ears, and mentions several other cures. "He adds, that when Mr. Greatrakes stroked for pains, he used nothing but his dry hand; if ulcers or running sores, he would use spittle in his hand or fingers; and for the evil, if they came to him before it was broke, he would stroke it, and ordered them to poultice it with boiled turnips, and so did they every day till it grew fit for lancing, &c." "Such as were troubled with fits of the mother, he would presently take off the fit by laying his glove on their head; but he never perfectly cured any, for their fits would return." But Mr. Thoresby mentions that he cured many of falling sickness, provided they remained with him, so that he might see them in three or four fits, else he could not cure them.

Some of his failures in England caused a clergyman of the name of Lloyd to write a book against him, entitled, "Wonders no Miracles, or Mr. Valentine Greatrakes' Gift of Healing examined." London, 4to. 1666. The latter vindicated himself in a publication named, "A brief Account of V. Greatrakes, and divers strange Cures by him performed; in a letter to the Hon. Robert Boyle, Esq." London, 4to. 1666. Lloyd's severe reflections on the reputation of "the Miraculous Conformist," seem to have borne down his reputation in England; and on his return to his own country nothing foreign was requisite to bear out in his case the truth of the old adage that "no man is a prophet in his own country." The last time that any mention is made of him by his contemporaries was in 1681: he was then living in Dublin, "but how long he lived after," says Dr. Smith, is uncertain.

In 1673, when Peter Walsh, the Franciscan, produced his History and Vindication of the Irish Remonstrance, Greatrakes appears to have sunk into obscurity. Walsh says, that no sooner had a Catholic wonder-worker made his exit, "than Greatrix, an *English* lay Protestant, started up to supply the former's place, by making people believe he himself, too, had a gift from God to cure all diseases by praying and stroking; even also at London, whither he came at last to cheat the world, as the former was thought to have done. What became of this Greatrake I neither know nor care; only this, I know that, not long after his practises on folks in London, he went out like the snuff of a candle, just as Finaghty did."(*a*)

(*a*) Walsh's History of the Irish Remonstrance, p. 736.

In addition to these notices of Greatrakes, we beg to refer our readers

Walsh, when Procurator of the Franciscans, was called on, in 1666, to lay before the National Congregation assembled in Dublin “a detailed account of all he had either heard from others, or by his own experience known, of that good father, the far-famed, wonder-working priest, father James O’Finaghty.” It is to be borne in mind that Walsh had taken a prominent part in the affairs of the Catholic Confederation, against the Cardinal Rinuccini, and in favour of the Viceroy Ormond, and, by his own admission, Finaghty had been of the opposite “nuncio party in the late troubles of the nation.” Ormond, again filling the same office in 1666, patronized Walsh, who was on very intimate and confidential terms with him; and after the departure of the latter from Ireland, so little were the tendencies of Father Walsh towards superstition or enthusiasm in religious matters appertaining to his Church, that in England he finally obtained some appointment in connexion with the Protestant Cathedral of Winchester, which did not render his services in a clerical way indispensable. There is another point, probably, that requires attention. Father Walsh professes over and over to have made his researches and report in a spirit of the utmost im-

to our preface to the Number of this Journal for Feb. 1846, pp. iii. iv. v. See also Walter Harris’s translation of Ware’s “Writers of Ireland,” where we have one of the earliest accounts of “Valentine Greatrakes, an estated Gentleman, born at Affane, in the county of Waterford, in 1628.” Besides the writings of Boyle, Stubbes, Thorsby, Lloyd, Charles Smith, Walsh, Love, Wichcot, Cudworth, and Patrick, where the question of Greatrakes’ cures are considered, we also find him mentioned by Dr. Henry Moore; and the ingenious novelist, Mr. St. Evermond, made him figure as the hero of a romance called “The Irish Prophet,” to which we have already alluded. The first volume of the Dublin Penny Journal, p. 401, likewise contains a brief memoir, with a portrait of this remarkable personage, as also a letter from Lord Conway, about his “sanative virtue” and “natural efficiency.”

Dr. Beal about this time communicated to the Royal Society the following statement with respect to practices somewhat similar to those of Greatrakes, and several of which, especially those enumerated under the fourth head, are still employed by persons of high rank and station at the present moment in Ireland: “1st. That he could make good proof of the curing or killing of a very great and dangerous wen, that had been very troublesome for two or three years, by the application of a dead man’s hand; whence the patient felt such a cold stream pass to the heart, that it did almost cause in him a fit of swooning. 2nd. That upon his brother’s knowledge, a certain cook in a noble family being reproached for the ugliness of his warty hands, was bid, by his lord, to rub his hand with that of a dead man; and that his lord dying soon after, the cook made use both of his lord’s advice and hand, and speedily found good effect. 3rd. That a gentleman who came lately out of Ireland informed him of an aged knight there, who, having great pain in his feet, insomuch that he was unable to use them, suffered a loving spaniel to lick his feet, mornings and evenings, till he found the pain appeased, and the use of his feet restored. This, saith the relator, was a gentle touch and transpiration; for he found the spirits transpire with a pleasing kind of titulation. 4th. That he can assure of an honest blacksmith, who caused vomitings by stroking the stomach, *gave the stool by stroking the belly*, and appeased the gout and other pains by stroking the parts affected.”—Vide Philos. Transact. Numb. 12, p. 206.”—ED.

partiality and candour, with a desire to do the fullest justice to the pretensions of the subject of his inquiries. But a cautious reader might be inclined to say, "methinks the gentleman doth protest too much:" nevertheless, bearing these things in mind, how the reporter was circumstanced and disposed, his account of the performances of the wonder-working priest is drawn up with singular judgment, care, and industry.

The first time and place that Father Walsh heard of this singular personage was in 1657, in London, during the reign of Cromwell. In a letter from an Irish Jesuit to one of his order in London, there was an account of one James Finaghty, a secular priest, who formerly had charge of a parish in the archbishopric of Tuam, apparently raised up by Providence, in those times of trouble and calamity, to confirm the people in their religion; and for this purpose "extraordinarily gifted with a true miraculous power of dispossessing devils, and curing too all sorts of other ills, even the most natural diseases, so that he drew the world after him, and not only Catholics but Protestants. Insomuch, that he had often a thousand, sometimes fifteen hundred, nay, two or three thousand, who followed him even through bogs, woods, mountains, and rocks, and desert places, whithersoever the people heard him to have fled from the persecution of Cromwell's officers and governours; that priests enough could not be had (though many accompanied him on purpose) to hear the confessions of the great multitude drawn to repentance and resolutions of a new life by the example of his life and wonder of his works: that, therefore, he was justly and principally, next after St. Patrick alone, esteemed another Thaumaturgus, or wonder-worker of Ireland," &c. &c. Readers, who may feel particularly disgusted at accounts of superstitious practices or occurrences in Ireland, and disposed to relinquish all research when these are met with in their own country, even in the chronicles of events of two centuries ago, may be reminded of the doings of Mr. Thom,—the new Messiah,—and his followers, in the vicinity of the principal cathedral town of England in our own times; and may be assured that a great deal more interest attaches to the performances of the Irish thaumaturgist, than does to the phrensied exploits, impious pretensions, and tragic catastrophe of the Canterbury prophet.

There are matters of interest, even in a medical point of view, in the singular effects produced on the imaginations, and, as it is alleged, on disease itself, in many instances, by the practices of Finaghty; and, notwithstanding his frequent failures and evident attempts to impose on the superstitious and weak-minded, it is a question of more than mere curiosity whether his practices of a curative kind were identical with those which Mesmer is commonly supposed to have been the originator of.

It is certain that practices similar to those of the animal magnetisers were in vogue with the Pagan Irish, and were condemned by St. Patrick; but, notwithstanding the condemnation, were still observed after Christianity was established. One of the first Irish

scholars of the day, Mr. Eugene Curry, recognises, in a pagan practice, called in Irish, *Tenn Lae*, or “The Enlightenment,”—a performance of a mesmeric kind.

The earliest account of this practice was found by that gentleman in an ancient Irish manuscript, where the affairs of Ireland are treated of during the interregnum between the death of Edirsgel More and Conaire More, about the year of our Lord 20.

The evils arising from the delay attending the election of a king, after the death of Edirsgel, led to a great assembly of the princes and chiefs at Tara, and there it was determined to practise the *Tenn Lae*, to ascertain the will of heaven respecting the succession. “The enlightenment” was, accordingly, performed in the usual manner. A young man was selected by the Druids; some raw meat was given to him to eat; a great number of solemn rites were performed. One of these consisted in breathing on him, and these operations continued till he was put into a deep trance; and while thus entranced, he was questioned as to the person who was destined to succeed Edirsgel. He then returned intelligible answers, describing the person spoken of. The young man was kept entranced till the Druids sent to a place some six or seven miles distant, which had been named by the young man, and there they found the person described and sought for, and they forthwith proclaimed him monarch.

In 1662, the Duke of Ormond being again Viceroy, Walsh, on his return to Ireland, heard once more of Father Finaghty working great wonders. He was commissioned, immediately after his arrival in Dublin, by his Grace of Ormond, “to look particularly and singly after him (the same Father Finaghty), and see he allured the people no longer, by going about so like a mountebank, cheating all the nation, nay and bringing his countrymen also into suspicion of some bad design among them; and this neither unjustly nor at all ungroundlessly, if his procession about the kingdom, and the multitude everywhere flocking to him, be considered.”

Walsh, then, was appointed not to inquire into the truth or falsehood of Finaghty’s pretended powers, but “to see that he allured the people no longer;” so that we are more likely to find in his report what was unfavourable to the pretensions of this man, in the result of his performances, than such things as might seem to give any support to them. Yet there is no *apparent design*, in the inquiry instituted, to deal unjustly or unfairly by the person who was the subject of it.

Walsh at once entered into communication “with the most judicious of all kinds, both ecclesiastics and laics, from all parts of the kingdom, at Dublin,” some of whom were of the county of Galway, where Finaghty had his ordinary residence, who had seen him practise on themselves and others. The result of his inquiries was :

1. That in 1662, previously to Ormond’s arrival in Ireland, Finaghty had obtained a pass from the authorities “to go freely where he pleased in Ireland,” and had gone from province to province, and had drawn after him great multitudes of people, “some expecting

to be healed of their infirmities ; others, incomparably the greater number, to be satisfied in their curiosity."

2. That he had blessed and hallowed a great number of wells in various places, and given them special titles; and, as the people imagined, had given them part of his own efficacious supernatural virtue for the cure of diseases.

3. That he had made a triumphant progress through several countries, till he came within five miles of Dublin, and was in all places "received, entertained, revered, honoured, and admired, not only by the common people, but by the gentry, nobility, knights, lords, ladies, and clergy also; and by many also presented by gifts, which he never refused."

4. That at Cluansillah, five miles from Dublin, such vast numbers of people of the city and adjacent country thronged about him, that many were trodden almost to death.

5. That from thence he returned to his own country, practising everywhere, "as his manner and delight was to practise in the open fields, amongst great multitudes, dispossessing of devils from such as he himself alone was pleased to judge possessed, and curing, too, or at least with pretending and attempting to cure all other diseases by prayers and exorcising, *and touching, and crossing, and stroking, and (sometimes also for some diseases) by blowing vehemently and laboriously into the ears of the diseased party.*"

6. That some Protestants, also, had gone to see him, others of them to get his helping hand; but amongst them many, and likewise amongst the Catholics, who returned extremely unsatisfied, looking on all his feats as impostures, while others cried them up for miraculous performances; "and from the former dissatisfied persons the information given to the Lord Lieutenant had proceeded."(a)

A Galway man well acquainted with Finaghty told Walsh, that the former had in his youth been a servant "to one Father Moor, an old, venerable Jesuit, and skilful exorcist," from whom he had learned his art and knowledge of exorcising. Subsequently Finaghty, when questioned on this point, denied the assertion. There was no Jesuit on the Irish Mission named Moor. There was one named Moor living in Drogheda in 1642 and 1649; he was superior of his brethren in Galway—then a septuagenarian—a man of great repute in his order(b).

Father Melaghlin, a Franciscan, who had a personal knowledge of Finaghty, spoke of him to Walsh as "a very illiterate, undiscerning person," who never had studied natural or rational philosophy,

(a) It is a very remarkable fact, that while the Roman Catholic clergy of Ireland, either from their own common sense, owing to the habits of strict discipline in which they are educated, their reverence for established authority, or their love of orthodoxy, have kept aloof from all modern quackery,—very many of the Irish Protestant clergy have been, of late years at least, the warmest advocates and most devoted apostles of Hydropathy, Homœopathy, Phrenology, Phreno-Magnetism, Mesmerism, and such like delusions.—ED.

(b) See Dr. Oliver's Jesuit Biographies, p. 259.

and very little divinity, or rather none at all, fit to make him a discerner of spirits," and yet he pretended that he knew a large portion of his countrymen and co-religionists were possessed by devils. Moreover, the Franciscan asserted that those whom he pretended to have cured were observed very soon to relapse into their former state.

Walsh could meet with only "two grave Catholic gentlemen," Geoffrey Brown and Richard Bellings of the Kilkenny Confederation, who could speak from their own knowledge of cures effected by Finaghty. These gentlemen "were no bigots." Bellings assured him that Finaghty had "a wonderful gift from God, of curing by exorcisms and prayers." Brown told him he had been present when a cripple, well known on the way, who had been always without the power of his lower limbs, "going upon all fours, with the aid of two short crutches, half a foot high," had been cured in the presence of a great multitude in the following manner:

The cripple being laid down at the feet of the Father, the latter prayed over him, signed him all over with the cross, and after some time bid him get up, "which the cripple did not;" but one of the assistants raised him up by main strength from his crutches, and held him up for some time with difficulty, the cripple crying out vehemently that he was in torture all the time. Then Finaghty had him laid down again, repeated all the former operations, and bid the assistant rise him up once more. The cripple was no sooner raised up than he stood without assistance, walked before all present, gave God thanks, and found himself perfectly cured; and the following Sunday attended a hurling match, "to the extream wonderment of all who had known him before." Mr. Brown, however, "would not determine whether what he saw was a true miracle or no." Mr. Bellings, some time after, in Walsh's hearing, solicited the Duke of Ormond for a pass for Finaghty. The Viceroy offered him one for Dublin, where, if he came and performed only one miracle, he should be honourably received and lodged even in the Castle. But he cautioned Mr. Bellings against allowing Catholics to be laughed at for their credulity.

About a year later Walsh received accounts of Father Finaghty, then in England, performing very wonderful cures, both on Catholics and Protestants, at the Portuguese Ambassador's in London, and at the Queen's at St. James's. It appears that he was sent for to London to cure the lady of a Portuguese nobleman, then staying with the Queen, who had lost her sight; and "Father Taig M'Eochny," *alias* Captain Power, an Irish Dominican, afterwards Bishop of Clonfert, was sent from the Court with money for father Finaghty. The mission was in vain, the money was lost,—the attempts of Finaghty to give sight to the blind countess proved a failure. Nevertheless, he maintained his credit with his friends, though the jealousy of some minister caused him to decamp from London. "He was thence honourably conveyed in a coach drawn by six horses, accompanied by an English Catholic gentleman,

through Oxford, to Chester and Holyhead. He remained in Wales for some days, with Lord Dillon and Mr. Garrett Moor, two great admirers of his, and then returned to Dublin.

The higher order of Catholics of the capital were said to have been rather scandalized by the circumstance of Father Finaghty having come accompanied from England by a Lancashire woman, whom he described as a demoniac. But while he remained in the capital "he performed" at the house of the Lord Fingall, and a great number of persons, both Catholics and Protestants; amongst the latter, the Countess of Antrim, conducted thither by Father Peter Talbot. The great feat promised on the occasion was to dispossess the Lancashire woman of a devil. Father Talbot, not unreasonably, required a dispossession *in signe visibile* for the satisfaction of the standers-by. Finaghty made no objection; however, he said it should be done by *visible sign*; he commenced his exorcism, and "falling again to his adjurations, failed manifestly, before all the people." It is worthy of observation, though Walsh passes over the fact unnoticed, that whenever Finaghty failed he never seemed in the least disconcerted, nor did he vouchsafe to attempt any apology for the failure. Walsh now set about "a last and most vigorous inquiry;" and the result of this new inquiry was as unsatisfactory, and the testimony as conflicting, as on the former occasion. All the Church fathers, regular and secular priests, seemed against Finaghty. They accused him of taking presents of horses, watches, gold, silver, pieces of woollen and linen cloths, &c. One venerable old Franciscan, in the convent of Clane, Father Dempsy, told Walsh the custom of Father Finaghty was, to assemble a multitude in an open field, and single out before the people some young maid whom he was wont to say was possessed by the devil. If the girl denied it, "he would box her and bang her lustily," until, being confounded with shame, she would confess whatever was required of her. He had acted thus at Downadea, at Sir Andrew Aylmer's; and the maid selected by him on that occasion, and buffeted into an admission of "possession," came to father Dempsy soon after, and confessed to him that she had been compelled by shame to give the answers required of her, but never had been possessed, to her knowledge, by any devil. At Castletown, in the diocese of Dublin, at Lady Dangan's, Walsh was informed that he had healed a lame man, and given sight to a blind one. But the parish priest of Castletown "seemed not thoroughly satisfied of the miraculousness of what was done there," for, besides praying, exhorting, touching, and crossing, he lay down on the cripple, stretched out the sinews of the legs, and straightened the knees forcibly; while at Lady White's, at Leixlip, where he restored the sight of a blind man, "with his fingers he forcibly opened the eye-lids of the blind man," yet neither could be said to be perfect cures; "the *blind man* did not see clearly, nor did the cripple go even then strongly and confidently."

Walsh at last had the good fortune of (being in Dublin when Finaghty was there) meeting with him; but previously he found

that some Protestant officials "had come to a resolution of bringing Finaghty before the Bishops' Court, for a wizard or an impostor;" but Dr. Loftus had interposed, and objected to that proceeding, "till Walsh's arrival or the Viceroy's return to Dublin."

The Roman Catholic clergy, on the other hand, had assembled, and discussed the propriety of prohibiting any further practices of his in Dublin, and to command him to depart, "as an impostor or a brain-sick man." The Franciscans alone continued to countenance him; and a young Protestant Irish gentlewoman, they informed Walsh, had been cured of "some inward disease in one of her limbs by him." The lady herself also informed him of the same fact, and of her having been subsequently "reconciled to the Roman Church." This was the only cure which Walsh could learn had been effected by him, and he attaches little importance to it.

He then proceeds to give the result of his own communication with Finaghty, whom he first met at the chapel of Father Aylmer, a secular priest, in Owen's-arch (Audoen's-arch?), when the latter was preparing for the altar, and was on his knees when Walsh entered. The substance of his answers to the different queries of the latter were: that he had formerly, he believed, the good opinion of all the clergy; that the Jesuits of late, both in England and at home, had opposed him; that he never denied, as Lord Clancarty had asserted, the power of curing natural disorders; that he had never learned modes of exorcism or curing from Father Moor; that whatever had been done by him was the gift of God, and the end of his performances was to manifest the truth of his religion; that he had informed Lord Aubigny, the Queen's Almoner in England, that he would undertake to cure as many sick as might be brought to him, after being duly examined by an expert physician, after the clergy of the Court had failed to heal them by their prayers; but that his challenge had not been accepted; and finally, that he again offered to do the same in Dublin, and commissioned Walsh to make that offer to the Lord Lieutenant and Council; that he feared no trial, and for once he had failed that he had succeeded a thousand times; that God had bestowed his gift of healing on him before he entered into orders, and that his first essay was with a book of exorcisms in the case of his own brother, one prayer from which book had caused the devil to restore some clothing Satan had stolen from that brother. After visiting him several times, Walsh at length had an opportunity of seeing him practise on twenty or thirty poor country people. Their ailments were aches and pains in various parts, weakness of sight, and deafness. One was a boy apparently blind, and another a girl of thirteen or fourteen who "was troubled with fairies."

He began with prayer and exorcism; these were very short. Having driven the pain, as he said, or the patient asserted, from one part to another, he followed it from place to place, "crossing and praying and conjuring;" and after two or three attempts "the patient, being questioned by him, answered, he or she was cured."

Then he bade the person return, kneel down, and return God thanks. In this way he proceeded from one to another, but occasionally varying the practice. In some cases "he used to blow very long and very strong into the ears of such who complained of deafness or pain in the organ, laying his mouth on the affected ear, or blowing so vehemently hard thereinto, that it must have been both painful to himself, and naturally (without any miracle at all) in some measure effectual to work in the organ some alteration." The practice of blowing into the ears of cattle, especially of horses, is an old popular arcanum, well known to cattle doctors and several veterinary practitioners in this country,—a practice much older than Walsh or Finaghty, and which has been revived with some notoriety within the last ten or twelve years.

Finaghty's repeated efforts to restore the sight of the blind boy were wholly unsuccessful; "yet he very carelessly, and without any further ceremony or notice taken thereof (the failure), giving over and turning away from the blind boy, passed on to some other of those who expected their turn, but who had no visible disease or evil, and practised upon them."

A poor woman from Crumlin, with the child "troubled with the fairies," next approached.

Finaghty said he must speak with the girl apart, and he led her away to another room, and "remained (alone) with her for a pretty while," Father Walsh thinking it odd that he had not been asked to be present at this conference. At length he allowed him and the others present to enter the room where he and the girl were. The latter was seated opposite an open window, the former was standing over her, praying and exorcising, crossing the head and forehead; and, according to the girl's account of her shifting aches, he pursued the pains from limb to limb, crossing and exorcising the affected part. Sometimes she said the pains were gone; then "he boxed her, said she lyed, and re-commenced his operations, *pursuing the pains in the same method till he comes down to her feet, then rubs hard, or rather strikes or strokes hard her foot, with his own over it in a sloping manner, so that her toe was the last he touched with his sole, as pretending to drive out the devil from that last habitation or retreat of his into her toe.*"

Then he bade her look out of the window and see how many people passed, and when she demurred he menaced her, and this had the effect of getting answers from her. He asked her if she saw a high mountain afar off, with a great fire on the top, and a multitude of black-looking people fighting, slaying, and throwing one another into the flames. She answered, "yes." He finished his exorcism by calling on a hundred thousand devils to come from hell and carry off their companion who possessed God's creature then present. But, strange to say, the girl having repeated her former declaration that she was cured,—Finaghty said again, "she lyed," and, turning to the beholders, said, "she is yet strongly possessed, she must be brought to me again."

Yet, after this scene, Father Walsh called on him in Kennedy's-lane, and finding him on his knees at his devotions, requested to be touched by him from the crown of the head to the soles of the feet, "for a little spice of the scurvy," which he had for many years. But though no great benefit appears to have been derived from the operation, he was resolved "to suspend his judgment till the great public trial before the Viceroy came on, which he (Finaghty) had demanded. The Viceroy gave some very excellent reasons to Walsh for not complying with this demand, but Father Walsh prevailed on him "to let the man have his will."

Finaghty came to Walsh one day, and complained of having been kept six weeks in town waiting for the Duke's license for the trial. Walsh informed him it had been granted; a number of sick would be sought out, and there should be a few Protestants amongst them, by the order of the Viceroy; and the trial should take place in two or three days. Next day Finaghty came by appointment to Walsh's abode (in Kennedy's-lane also), and said mass privately there in the oratory of the latter. Two grave and distinguished gentlemen of the Court came in "unexpectedly," as Walsh states; one was the famous physician and great traveller, Sir William Petty; the other Sir Robert Southwell, one of the clerks of the Council at Whitehall, who had lately been Envoy Extraordinary at the Court of Portugal. Sir William Petty had been charged, jointly with Dr. Yarner, to examine the sick persons who were then in town in readiness for the trial. Finaghty was sitting at the fire when Walsh, pointing to him, told the gentlemen that was the "far-famed, wonder-working priest, Father James Finaghty." Sir William Petty spoke to him in very courteous terms, saying, with respect to his wonder-working powers, his own mind was as a sheet of blank paper; he had no impression for or against them: "You may write in my soul what you please as to the way of worshipping God, if you attest that way by plain miracle. And, therefore, if you do, by your prayer, remove this wart which you see on my finger, I will presently declare myself of your religion." Finaghty objected to the proposal, or to any deductions that might be drawn from its failure, if accepted; so it was withdrawn. Sir William then said he laboured under a troublesome infirmity; he was purblind or near-sighted, and if Father Finaghty would cure him, he would humbly and gratefully acknowledge "God's merciful and wonderful hand therein." Father Finaghty rose up and said, "let us try." He then turned his face to the wall, knelt down, and seemed to prepare, by private prayer, for the attempt. Sir William and his companion, who resolved to second the operator's efforts as much as in them lay, knelt down likewise and prayed, as did also Father Walsh. When Finaghty arose he put a stole about his neck, and sprinkled them all with holy water; then placed Sir William between him and the light of the window, "said a prayer proper for the eyes," and repeatedly crossed the eyes of the learned physician. Then he put a Bible in Sir William's hand, and asked him could he read it bet-

ter than formerly. The latter, in his hopefulness of an improvement, at first thought his sight "mightily amended," but, soon finding his error, he told Father Finaghty how it was. The operation was repeated, with the same result, a second time. "Father Finaghty, without further attempt or ceremony, or word spoken by him, turns aside, pulls off the stole, puts on his hat, and takes his former seat at the fire, with his back turned to us, as unconcernedly as might be." Sir William put on his hat also, and asked Walsh if he knew any thing of necromancy, for he knew a book that treated of that science, wherein every word of the prayer used by Father Finaghty was to be found. The book, he stated, was said to be written by "Frater Petrus Lombardus Minor." The book was then shewn to Walsh (for it strangely appears Sir William had it in his pocket), and Walsh acknowledged there was no material difference between the two forms of prayer. "Sir William, before he took his departure, said, in a solemn way, he had a proposal to make: Let the gentleman (Finaghty) assemble in a field a multitude of sick people, as he is wont to do, and he, Sir William, would bind himself in a sum of £100, to be paid in gold to Father Finaghty, to cure by his own practice as many as Father Finaghty should cure by his. Then he and Sir Robert Southwell went away, without so much as saluting or noticing in any way Father Finaghty."

"This was the last experiment I saw of that good father," says Walsh. Next day the latter, by the Viceroy's orders, intimated to him all was in readiness for the proposed trial. "The poor gentleman (at this intimation) discovered, even in his countenance, his inward anguish and extreme trouble." It was evident he never expected the permission of the State would be given for such a trial. He immediately said he could not stay; he must set out next day for Connaught; he was weak in body; his health had been impaired in Dublin; he suffered from night perspiration, which had been brought on by the labour of mind and body attending his performances; he must go to the country to recruit his strength, then he would return and perform all he had promised. All remonstrances were, for a length of time, in vain. The plea of ill health, he was reminded, was untenable; he eat and drank, and slept well. The world, if he fled, would set him down for an impostor. At length Finaghty said, "he would then stay, and appear without further delay." Poor Father Finaghty was put by the wily Viceroy and his astute agent "in a fix." Shortly after his assent was given to the recommendation of Walsh to stand his ground, he said: "Oh! that I had those two possessed women which the Jesuits brought me the other day."

Walsh now kept a sharp look out after the thaumaturgist. The night before the appointed trial he caused him to lodge in his house. Finaghty retired to bed very confident in his manner of success on the morrow. At day-break, when Walsh arose according to custom, he was surprised to see Finaghty enter his room accoutred for a journey, and state to him that he had been perspiring all night (pro-

bable enough), he was sick, he could not stay, he had a horse ready for his departure; and to have him beg also to make his excuses to the Viceroy.

A sick man, setting out on a long journey on horseback, in the depth of winter, seemed somewhat strange to Walsh. Finaghty was called on to sit down and write to the Viceroy his reason for abandoning the proposed trial. Finaghty said he was a poor master of the pen; he could not presume to address a Lord Lieutenant. Walsh replied, the excuse was an idle one; he could write very well, and good sense too, when he pleased. It was diamond cut diamond. Finaghty would not commit himself on paper. The menaced prosecution in the Bishop's Court was not abandoned, only suspended. Witchcraft was a felony, punishable at the stake, and Finaghty had more ambition to do miracles than to suffer martyrdom.

Walsh gave him some money for his journey; charged him to make no further attempts at healing or exorcising on his route to Galway; he bore himself submissively, "and, two hours after, before he left town, he sent me (says Walsh) a little printed English book in 12mo or 16mo, an account of his own miracles lately done in England." Here ends Father Walsh's report to the lords and fathers of his order in congregation assembled.

It appears, by a note to the document in question, that, subsequently to his flight from Dublin, he still practised on maids and women in Connaught; and some of the latter, whom he declared demoniacs, he shut up in Portumna, and, by discipline and fasting, drove almost mad. The reader may, probably, recollect the similar result produced by similar means on the nuns of Loudon in France, about the same period, that ended in the judicial murder of Urban Grandier. The Archbishop of Tuam finally took Father Finaghty to task for practising exorcisms by wholesale, and declaring multitudes of women demoniacs, "and for further saying, that all the women in Ireland were possessed, i. e. by the devil specially possessed." He was forbidden to practise any more in Connaught, and his feats everywhere else were generally opposed and prohibited. "He went out like the snuff of a candle," as we are told by Walsh. "He made a great noise," we learn from Dr. Smith, "both before and after the Restoration, for curing all sorts of diseases (which he held to be the effect of possession), by exorcisms and stroking, and was followed for some time by vast numbers of people. But at last he was discovered to be a mere impostor." This is all that Smith condescends to say of him, yet his career has more in it to excite curiosity and attention than that of Greatrakes, to whose performances he has devoted some pages.

Whether Finaghty, the far-famed wonder-worker, was a mere impostor, a mere fanatic, a compound of both, or a man who performed some cures, which neither a mere fanatic nor a mere impostor could have effected, and, whether those cures were made alone by an influence exercised over the imagination, or by practices productive of phenomena (of whatever nature they may be) similar

to those produced by mesmeric operations, the reader will determine.

In conclusion, it may be observed that practices analogous to those of animal magnetizers, for the cure of diseases, may be traced in many works of antiquity, and the popular modes of cure by the *medicine men* amongst some tribes of American Indians, the *hakims* in the East, the *fetish* people in Africa, and the *handling doctors* in some parts of Ireland.

The simple practice of handling or stroking with the hand, in all probability, preceded the use of the magnet for the cure of disease. Lessing erroneously ascribed to Paracelsus the use of the magnet, as a remedial operation. Cælius, who flourished A. D. 500, making mention of it, says: "We are assured those who have the gout in their hands or feet, or convulsions, find relief when they hold a magnet."(*a*)

Paracelsus, who surpassed all the wonder-workers of antiquity, and believers in marvellous scientific practices, even in the possibility of making "homunculi" by them, particularly eulogized the use of the magnet for the cure of disease: fluxes and hæmorrhages, and various other maladies, he tells us, were curable by magnetic influence.

In the fifteenth century Marcellus speaks of the use of the magnet for the cure of tooth-ache, and Leonard Camellus, for the same disorder, speaks of its application to the head. Kircher mentions the use of magnetic beads worn round the neck; and Ambrose Parè speaks of the employment of the magnet in some surgical operations. In 1770, Father Hehl, a Jesuit professor of astronomy, in Vienna, Beckman states, communicated to Anton Mesmer the wonderful effects produced by magnetized steel plates; and in 1798, Perkin's magnetic steel tractors obtained a temporary notoriety; but the *modus operandi*, both with Mesmer and Perkins, as far as regards the mere manipulation, imposition of hands, passes, or friction, was the old popular practice that has been already referred to,—the handling or moving of hands over the sick,—of those operators, in various countries, who professed to cure disease by the combined power of magic and medicine, or superhuman means alone, with the influence, real or supposed, of the magnet superadded to it.

IRISH ASTROLOGERS.

In our Preface to the present series of this Journal, we mentioned the name of "Isaac Butler, Surgeon, Astrologer, Almanac-maker, and Botanist," and, moreover, Satellite to the Physico-Historical Society in 1744.

This genius, of whose birth or lineage history has not informed us, was employed by this society to make inquiries after rare plants, and to travel in search of fossils, simples, and such other curiosities

(*a*) Ap. Beckman's Hist. of Inventions. London ed., vol. i. p. 44.

as were mentioned in the society's proposals. He was also required to produce, from time to time, lists of the names and localities of all the indigenous plants then in blow in the vicinity of Dublin. He procured specimens of mineral waters both for the societies and for Dr. Rutty. He furnished the Physico-Historical Society with a catalogue of plants and minerals found in various parts of the kingdom, which is still preserved in the minute-book of this body in the library of the Royal Irish Academy. Besides Butler's knowledge of the sciences, natural and unnatural, visible and occult, chemical and astrological, it would appear that he was somewhat of an antiquary, and was at one time employed by the Dean and Chapter of St. Patrick's to collect materials for a history of their cathedral. Butler died on the 7th December, 1755. In the minute-book of the Medico-Philosophical Society we find the following entry on the 7th of December, 1756:

"Proposed that the Eulogium upon Isaac Butler, drawn up by a Member of this Society, be inserted in this book." A portion of this is as follows:

"On Tuesday last, at 7 Min. four Sec. past Three, *Post Meridian*, descended to the *Antipodes* or *Nadir*, at his Lodgings under the Sign *Leo*, in *Taurus*, or Bull Alley, the *Umbra* or *Penumbra*, of Mr. Isaac Butler, *Ptolomean Philomath*, *judicial Astrologer*, Discoverer of Losses, *Botanist*, and Calculator of Nativities, having passed the *Meridian* of Life, and his grand Climacteric, in the 66th Year of his Age.

"He had been formerly a Student under, and for several late Revolutions of this Globe, was Successor to the late truly *Adept*, Doctor John Whalley, Professor of the celebrated Astrological Art of the Doctors *Lilly* and *Partridge*, of *Bickerstaffian* Memory, which Dr. *Whalley* did for many Years calculate and publish the principal Almanack in Ireland, at a time when *judicial Astrology* was held by Philosophers in such Reverence, that they thought it rather supernatural, than a Science founded on *Sidereal Influences*. The like learned *Ephemeris* and Predictions, since his Master's *Culmination* to the *Medium Cæli* below the *Horizon*, have been annually set forth by Mr. *Butler*, who was a kind of *Gymnosophist* and *Rosicrusian* well skilled in the Occult Sciences, and all the Wisdom of *Ptolomey*, *Erra Pater*, *Cornelius Agrippa*, and *Tycho Brahe*, which, besides the Changes that were to happen in our Atmosphere, and other the usual Furniture of Kalenders, contained the Gesocentric Courses, Revolutions and Aspects of the Planets, calculated for the Meridian of this Hon. City of Dublin.

"He also inherited from his Master many physical Secrets, and gained such a Knowledge in *Botany*, that he not only collected Simples for the Curious, and Officinals for the Sick, but he also taught several Tyroes in Pharmacy to know most of our indigenous Vegetables.

"December 7th, 1755, this truly greatly *Adept* departed this life; having hastened his end by Laudanum taken in Brandy, which he prescribed for himself, in order to dye like *Socrates* and other antient Sages.

"John Smith, by Trade a Weaver, by Profession a Quaker, being trained up at the feet of our celebrated Gamaliel, and many years his Disciple, succeeded to the Great Honour of being his Successor, in constructing of Almanacks, in Botanical Researches; and being also Beadle to the Company of Apothecaries; and was also chosen Sattelite to a Society of Virtuosi, to which his Master belonged, but being no Conjurer, he has not meddled with Fortune-Telling."

A more lengthened eulogium, in the same strain, appeared in the *Universal Advertiser* of Saturday, December 11, 1755.

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PART I.
ORIGINAL COMMUNICATIONS.

ART. VII.—*Observations on the Application of the Seton, in ununited Fractures,—with Cases; also a Case of Resection of Portions of the Tibia and Fibula to remove Deformity,—with Illustrations.* By FRANCIS RYND, A. M., F. R. C. S., Surgeon to the Meath Hospital.

AMONGST the embarrassments occasionally experienced by the practical surgeon, ununited fractures hold a very prominent position. After the patient has submitted to confinement perhaps for weeks, and during that time been subjected to restraint, which, under the most favourable circumstances, must have been irksome and unpleasant, there can be nothing more disheartening to him and more distressing to his surgeon than the discovery that little or no progress has been made in the cure, and that the injured limb remains as powerless and as incapable of affording support or motion as it had been immediately after the accident. It forms no part of my present purpose to enter on an inquiry as to the causes that may occa-



sion this very untoward occurrence; they are enumerated in every systematic work, and so numerous that one might well be surprised at its comparative infrequency,—such as indiscretion or impatience on the part of the sufferer; carelessness or incompetency in the surgeon; age, habit, and temperament of the patient; or the presence in his constitution of some vice or taint, such as scrofula, venereal, scurvy, or cancer. Still less am I disposed to consider the discrepancies of opinion that prevail as to the pathology of the affection, and the condition in which the ends of the fragments may exist, although it is obvious that if a variety of causes can contribute to the non-union of fracture, and if the faces of the fragments are found in such different conditions as stated by Larrey, Boyer, and others, any one mode of treatment can scarcely be applicable to every case. Accordingly, such has practically been found to be the case; and the different plans that, from time to time, have been recommended, besides the great objections of pain and danger, are open to the greater one of having proved generally unsuccessful. I shall briefly notice two or three of these.

Friction of the ends of the fragments on each other has at least the merit of antiquity on its side, having been recommended by Celsus, but in modern days it derives its chief support from the authority of John Hunter: it is, however, based on imperfect or erroneous notions of pathology. If it be assumed that the faces of the fragments are coated with a substance resembling cartilage, and have in other respects approached the structure of an articulation, then friction can only be of service when carried to the extent of rubbing away this new material, breaking up all adventitious formations, and reducing the ends of the bones to a state as nearly as possible resembling that of a recent fracture; thus supposing the infliction of a degree of violence scarcely practicable, and which could not be endured if it was so. Again, if with Boyer we believe that the fragments are actually bound together by a ligamentous substance in every case, and that the diseased con-

dition consists in the formation of a soft and yielding, instead of a firm and bony union, it is manifest that no friction short of that which would be sufficient to break the ligament could be likely to prove beneficial. If these remarks are correct, friction is generally inapplicable in old and advanced cases, and, according to my experience, has always proved so ; but in recent cases, when the process of union is delayed rather than stopped, when there is a sluggishness and inactivity rather than a cessation of the restorative functions, then the stimulus of a little additional violence may possibly prove advantageous, although in such circumstances the same result might, in most instances, be more safely attained by rest and confinement, if the patient could be induced to submit.

As to the proposal of White, to cut down on the fracture, and saw away the ends of the fragments, I suppose no surgeon of the present day could seriously entertain it. It would be the conversion of the case into a compound fracture of the worst form, and that too in the teeth of some undiscovered cause that had been sufficient to prevent the union of a simple one. It would also be most difficult of performance, and, if successful, must place the bones in a condition in which many surgeons believe nothing but a ligamentous union could occur, namely, with a considerable interval of space between the fragments: and when the necessary consequences of the operation are taken into account,—the inflammation, the fever, the tedious and wasting suppuration, the protracted suffering of the unhappy patient,—very little argument will suffice for nearly erasing this one from the list of surgical operations. I once had occasion to cut down on a fracture that had been greatly mismanaged, and remove portions of the crooked bones, which occasioned an intolerable deformity, and the results of that case, although ultimately successful, were such as to prove the extreme danger attendant on the operation, and establish the opinion of Boyer, that it ought not to be performed unless “*lors qu’elle est le seul moyen de guerison et que le malade veut à tout prix re-*

couvrer l'usage d'un membre inutile." I have added this case to those successfully treated by the seton.

The passage of a seton between the ends of the ununited fragments, as suggested and successfully practised by Dr. Physick, of New York, although less objectionable than the preceding, is nevertheless attended with danger, and, like all others, uncertain in its result, having failed in the hands of very eminent practitioners. This, however, is only to be expected; for, if the process of union has been arrested by some constitutional defect, it will be vain to hope for benefit from any local treatment until such defect is discovered and removed. It appears to be, in many instances, difficult of performance, particularly when the limb is large and fleshy, and the fracture deeply-seated; and dangerous, especially in hospital, from the risk of erysipelas or other unhealthy inflammation attacking such a deep and narrow wound; and that if it could be superseded by some more simple, yet equally efficacious expedient, a valuable improvement would be effected in this department of surgery. Influenced by these considerations, I venture to publish the following cases; and although fully aware that the successful issue of three or four, or even a greater number of cases, must be inadequate to the establishment of a general principle, yet it will effect something if it attracts attention, and leads to other and more extensive trials; and if the comparatively mild practice I have pursued shall appear worthy of adoption by others, and prove even as effectual as the more painful and perilous measures, in relieving a serious and formidable class of injuries, I shall hope for its admission as an improvement in practical surgery.

I. Ununited Fracture of the Tibia and Fibula; Employment of the Seton; Recovery.

Eliza Kavanagh, aged twenty-four years, had both bones of the right leg fractured about five inches above the ankle-joint, from a fall she received on the 7th of May, 1839. She

was otherwise in excellent health, and had always been free from any diseased taint. On the day of the accident she was admitted into the Meath Hospital, splints were applied to the limb, and she was treated with the usual care and precautions, notwithstanding which it was found impossible to procure bony union. Among other means, friction of the broken extremities on each other was tried without any success.

On Thursday, the 25th of July, eleven weeks after the accident occurred, I introduced a seton, made of silk, over the fractured extremities, in the following manner: A curved seton-needle was passed into the inside of the leg, exactly opposite to the fracture, through the integuments, so deeply as nearly to touch the posterior internal edge of the tibia; it was then directed in a semicircular course anteriorly, over and close to the prominent extremities of the fractured bones, and was brought out on the outside of the limb, so that the fracture lay between the points of its entrance and exit. It did not either touch or pass between the fractured extremities of the bones. The ends of the seton were secured, and the patient was enjoined to preserve perfect rest.

August 1st. There is considerable inflammation over the leg, but chiefly along the course of the seton. Ordered a saline aperient, with tartrate of antimony.

8th. Inflammation abated considerably; the openings made by the seton are discharging; no pain in the seat of fracture; the limb has been kept at perfect rest. Ordered a linseed-meal poultice over the openings.

18th. The limb was very cautiously examined to-day: there appeared to be perfect union, but the fear of disturbing the process prevented such an examination being made as would authorize a decided opinion being given. The seton does not cause much discharge, nor give pain; there is not any ulceration, except immediately round the openings. The patient was enjoined to remain in a state of perfect rest.

22nd. The union appears perfect; there is not the slightest

motion in the fractured part; says she walked in the ward this morning with the assistance of a crutch.

24th. She walked very steadily to-day, and felt no inconvenience except from pain and stiffness in her ankle-joints, which are caused by want of use. Ordered to have a stream of tepid water poured from a kettle on the joints for a quarter of an hour, and then to have them well rubbed with chamois leather. Seton removed.

September 1st. Has used and still uses the douche and shampooing. The union is perfectly firm; she wears a bandage on the leg; walks steadily and with ease; uneasiness has nearly gone from the joints, and she is considered sufficiently well to be dismissed.

This woman has come to the hospital frequently since for inspection, and has never had the least uncomfortable sensation from the injury, nor is there any difference in the length of the limbs: the fractured leg performs its functions perfectly.

The next case possesses an equal, perhaps a greater degree of interest; for, having been to a certain extent unsuccessful in hospital, it teaches the absolute necessity of attending to the accessorial measures of perfect rest and the exact maintenance of the fragments in their position: it may also afford a practical hint not to be over-curious or incautious in examining prematurely into the process of the case.

II. *Fracture of the Humerus ununited at the end of ten Months; Employment of the Seton; unossified Union; final Recovery.*

John Reilly, aged thirty years, was admitted into hospital on the 7th September, 1839, with ununited fracture of the left humerus. The bone appears to have been fractured obliquely in its lower third, immediately above the condyles; the fragments are quite moveable in the situation of the fracture; and when he attempts to raise the fore-arm, its weight dislocates the fragments at the point of fracture, and the pressure of the lower one against the brachial nerves and vessels gives him so much

pain that he is obliged to desist; besides this, he cannot raise it or direct its motions except by taking hold of the hand with the other; in short, the limb is useless. The fore-arm, with the adjoining articulated portion of humerus, can be rotated on the upper portion; there is not any sensation of crepitus, and the surfaces appear to be smooth. He states that the arm was broken fourteen months ago, by a fall from a wall; it was put up in splints, and the usual treatment prescribed. At the end of two months it was examined, and found to be ununited; the fragments were well rubbed together, and the splints were re-applied; at the expiration of two months more it was examined again, but no union existed; a long interval elapsed without anything being done, and finally he has come here for relief.

10th. I introduced the seton, by passing in the needle posterior to the brachial vessels, and pushing it round the back of the arm, over and close to the fractured extremities, until it came out at the external edge of the biceps muscle; the arm was bandaged and put in splints.

12th. Complains of pain and heat in the arm; says it feels tightly bound; pulse 90; bandage and splints removed; ordered compound infusion of roses, with sulphate of magnesia, to be taken every second hour, to move the bowels; and a linseed-meal poultice to the arm.

14th. No increase of inflammation, but feels the arm tense. Ordered a poultice over the course of the seton, saline mixture, and two grains of James's powder three times a day.

19th. Inflammatory symptoms have nearly subsided, and healthy pus issues from the wounds; there is a good deal of swelling of the arm.

23rd. I made gentle pressure along the course of the seton, and gave exit to about an ounce of matter; he felt quite comfortable after this; the arm was put in splints and bandaged, and he was ordered full diet, and a pint of porter daily.

28th. No uneasiness of any kind; openings discharging moderately, but rather too much for the state of his system.

30th. Appears to be doing well.

October 11th. Arm doing well, but he has got cold: ordered a pectoral mixture, of mucilage, antimonial wine, and camphorated tincture of opium.

14th. Cough nearly well; splints and bandage removed; the union is not solid, but it is so far perfect that, when he attempts to raise the arm, the humerus continues in a straight line, as if there was no solution of continuity in the bone; seton removed; a starch bandage applied; splints continued.

November 4th. Doing well; all appears steady.

12th. Splints and bandages were all removed to-day; the continuity was complete, but ossification had not taken place; to hasten this process an effort to excite inflammation was unfortunately had recourse to, by a manipulation of the arm, similar to that of rubbing the broken extremities together: the result was, that on leaving the hospital some time after, which he was obliged to do on domestic business, the firmness at the fractured part had diminished, and the arm was pliant, but it still retained as much firmness as enabled it to resist the action of the muscles, so that he could raise his hand to his head, and direct the motions of the fore-arm pretty well.

About four months after this, I heard he was perfectly well, and was able to dig in his garden; and that he had substituted a glue bandage for that of the starch, and wore it for three months without intermission.

This case establishes the necessity for maintaining absolute rest, and freedom from motion of every kind, in the injured limb in its advance towards a cure. This may, perhaps, be difficult to accomplish; but by the aid of the starch bandage, splints, and making the patient aware of the injury certain to ensue if he does not comply with the prescribed regulations, it will be found to be quite attainable.

The examination of the limb should be conducted with great caution, and never made until the treatment has been far advanced, and an attentive observation of the case confirmed

its safety ; when made, if the smallest improvement can be discovered, and the part has become more firm, even in the least degree, nature must be permitted to advance the new process in her own way ; for any attempt to expedite it will have a contrary effect, and in numerous instances (particularly when some diseased taint exists in the constitution) most probably destroy it altogether. I do not propose to explain how or where this process originates, what tissues are engaged in it, or how it is carried on ; my impression being, that bone, periosteum, arteries, veins, nerves, muscles, absorbents, in short, that each and every organ constituting the limb contributes its portion towards its reorganization ; and it was the hope of exciting a simultaneous action in all, without injuring the vitality of any, that first suggested to me the application of the seton in this particular way.

Amongst the many constitutional causes mentioned as obstructions to the bony union of fractures, none stands more prominently forward than scrofula. The following case proves how true this is, at the same time that it gives ample grounds for attributing much efficacy to the action of the seton.

III. *Fracture of the Femur ; ligamentous Union for fifteen Months ; Seton ; Cure.*

William Archer, aged 13, admitted September 6th, 1840. His left femur presents a prominence on the outer side of its upper third ; on examination the prominence is found to be caused by the lower portion of the bone projecting, the result of an oblique fracture that occurred fifteen months ago ; the broken fragments do not grate together when they are moved, but motion is perfect between them ; when they are rotated on each other, the rotation is restrained beyond a certain extent by a bond of union evidently ligamentous : the boy is thin and of spare habit, which enables this to be easily perceived. Extension elongates the limb three-fourths of an inch, and when

he stands with the thigh exposed, the inferior portion of the fractured bone is seen to jerk upwards on the upper fragment. He is of scrofulous temperament, with light hair, light blue eyes, very clear complexion, and enlarged submental and cervical glands. His history is as follows: about fifteen months ago a boy fell on him, and caused a simple fracture of his thigh; he was immediately brought to hospital, and, in the space of nine months, union having taken place, he was dismissed cured. In about five weeks after this, as he was sitting down on his form at school, he suddenly felt the bone as if quite loose, but not painful, until he attempted to walk, when the pain was slight. After seven or eight days the pain subsided entirely, but the leg felt unsteady, and he got a crutch, by the assistance of which he has walked tolerably ever since, except that for the last six weeks he says he thinks the bones have become more loose. His digestion not being in good order, he was ordered some compound infusion of gentian, with sulphate of magnesia.

14th. His general health being much improved, a seton, consisting of a skein of silk, was this day introduced, by pushing a curved seton-needle into the posterior part of the thigh, down to the fractured bone, then turning it outwards round the fractured extremities, so as to compass about two-thirds of their circumference, and to rest as closely as possible in contact with them; it was brought out in front of the thigh. The limb was enveloped in a starch bandage, and placed in the straight position; Dessault's apparatus for fractured thigh was applied; and perfect rest was enjoined. Small holes were left in the bandage, opposite the entrance and exit of the seton.

17th. Complains of pain in the course of the seton; pulse 100; skin hot, and bowels confined. Ordered a saline aperient daily, with calomel and James's Powder at night.

20th. Healthy matter oozes through the openings; the inflammation has nearly disappeared; skin is moist; pulse 70. All his medicines omitted.

28th. The discharge of matter has increased for the last

two days, and he had slight perspiration last night; pulse 90, soft; did not sleep well. The seton was removed, and a scored splint was bound on the front of the thigh, the more effectually to secure absolute rest to the limb.

October 5th. Pulse 60; heat of skin natural; tongue clean; discharge has nearly ceased; appetite good; sleeps well.

20th. Complains very much that the bandage irritates his leg, and prevents him sleeping; the wounds caused by the seton-needle are quite healed; he says he moved his limb in the bed last night, and it felt strong. The bandages and splints were removed to-day, and he was enjoined to keep the limb without motion of any kind.

28th. Sat up in his bed to-day, and says his leg is well; a very cautious examination was made, and the fractured portion appeared to be firm; enjoined perfect rest still.

November 2nd. A strict examination was made to-day, and the union was found to be quite consolidated; he walked for five minutes leaning on the arm of an assistant. Ordered crutches, and to get up daily.

7th. Walked this day for a short time without a crutch; says he is quite well, and wishes to go home. Dismissed.

He has been at the hospital frequently since, and within this month (January, 1846) I have seen him: he has never suffered the slightest inconvenience from the fractured bone since dismissal from hospital in the year 1840; he has perfect use of the limb, and its length is not diminished.

IV. *Fracture of the Patella; ligamentous Union; Seton; Cure.* *Reported by Mr. R. Gregory.*

Patrick Mac Donnell, aged 24, a healthy-looking man, of spare habit, came to me on the 2nd of November, 1844, unable to walk except with the assistance of a crutch, owing to a kick from a horse he received a fortnight previously on the knee of his right leg. The patella was fractured transversely in its centre, and the fragments were about an inch separate. There was some swelling and inflammation of the joint, with a good deal of

pain extending up the thigh; the inflammation was very acute, but subsided a few days back, and he thought he was getting well, but on attempting to walk he could not, he says, prevent the knee from falling forwards, and he thought it would fall out of the socket, it had become so loose from the injury. He has remained quiet since the accident, but has not had any surgical assistance. I put him into hospital, brought the fragments together, and retained them so; his leg and thigh were laid in a splint that fitted along the back of the limb, and grasped it tightly round the calf of the leg and centre of the thigh; the heel and leg were raised on a plane higher than the thigh: he lay on his back in a state of perfect rest. He remained in this state, closely watched and cared, until the 24th of December, when the bone was examined, and there was found to exist a ligamentous union between the fragments; there was no inflammation present, and the man complained much of the long confinement. On this day I introduced the seton, by pushing a narrow seton-needle through the integuments at the outer margin of the patella, and passing it on in front of that bone immediately over the newly-formed bond of union, and bringing it out on the inner edge of the bone; the seton was left in the course of the needle: the limb had been previously put up in a splint, and the broken bone secured with a bandage, so that it could not be moved. The patient was so tractable, and so anxious to get well, that every suggestion we made to him to keep the joint in a state of perfect rest was anxiously adopted.

January 6th, 1845. Complains of pain in the course of the seton; the integuments of the patella and lateral parts of the joint are inflamed and swelled, but not so much as to oblige me to remove the bandages; his tongue is clean; bowels in good order; pulse 80, and rest not much disturbed. Ordered three grains of James's Powder at night.

10th. Had an uncomfortable feel in the joint; says that pain shoots through it occasionally, from before backwards; there is a good deal of inflammation all over the front of the

joint, and considerable tenderness on slight pressure, particularly in the situation of the bursa of the patella; there is a slight oozing of matter from the openings; pulse 90; skin hotter than natural; bowels confined; some thirst; and did not sleep so well last night. Seton removed, and to have a saline aperient.

11th. Feels easier to-day; the shooting pain is not so frequent; pulse 90; thirst not urgent; skin moist; some matter discharging; bowels were moved three times. Ordered a draught of camphor mixture and antimonial wine at night.

14th. The shooting pains have subsided, but there is still considerable superficial inflammation; the openings are discharging a little, and the discharge has a reddish tinge; the swelling is less, and he can bear gentle pressure on the joint; pulse 86; skin soft; slept these two last nights comfortably; had some starting in the limb that awoke him in the night. Ordered ten drops of black drop at bed hour to-night.

18th. Is going on well; the fever has subsided; the inflammation of the joint is nearly gone; there is a slight appearance of discharge at the openings; he says he feels comfortable.

21st. No complaint; a little discharge from the external opening, the other is healed; has maintained the most perfect rest, and is enjoined to do so still.

24th. Doing well; openings healed; inflammation entirely subsided.

29th. No change; still maintains perfect rest.

February 3rd. Made a movement of the knee last night incautiously, it gave him no pain, and he says he thinks the bone did not move in its centre as formerly; enjoined rest still.

15th. I examined the bone to-day, and there is not the least motion in the seat of fracture; he says he examined it himself two nights ago, and attempted to move one fragment against the other, but could not. He got permission to sit up a little to-day.

16th. Walked in the ward with the support of a stick.

18th. Has used the leg since, and can stand steady without support; says the knee is very stiff, but it is perfectly firm. Ordered a tepid water douche bath to the knee, and the joint to be rubbed gently after it with the hand.

20th. He left hospital yesterday, with the bone firmly united, and the union perfectly solid.

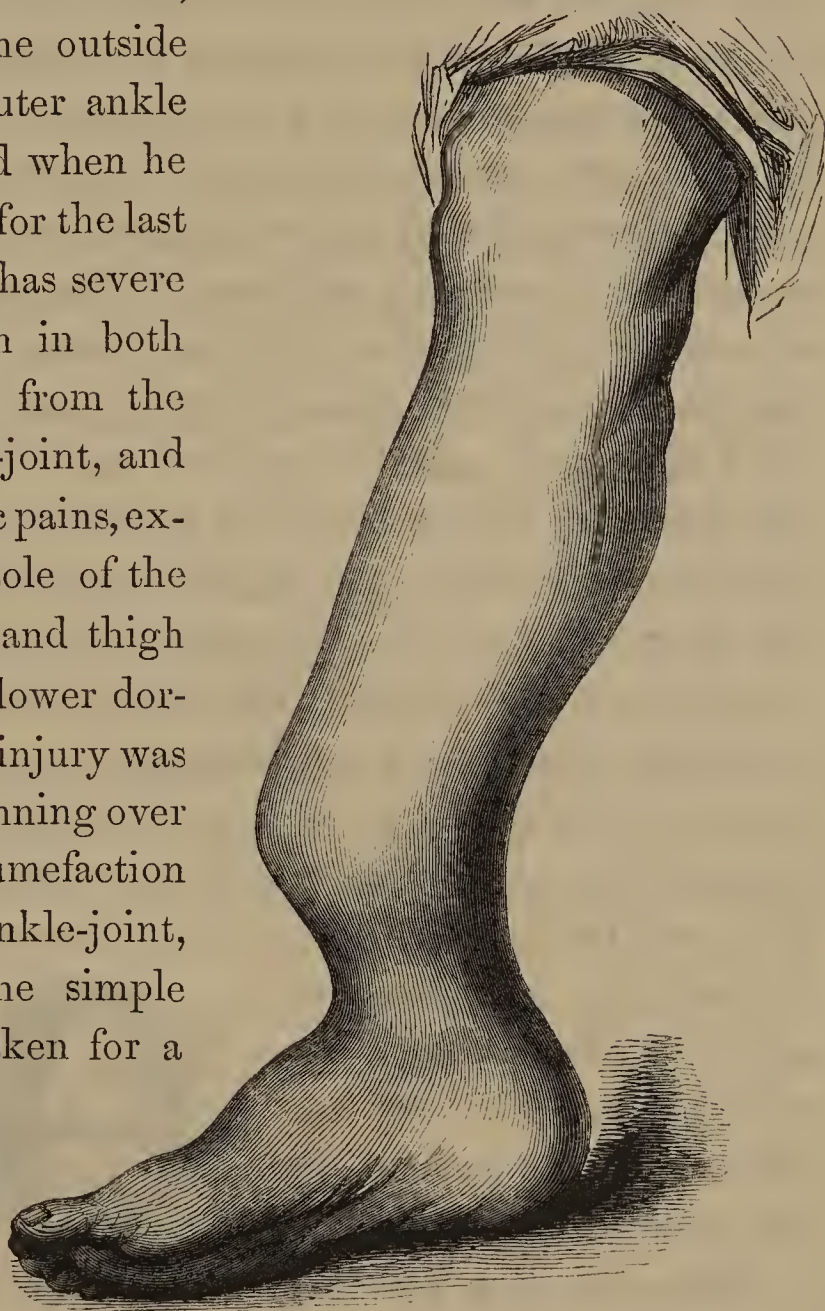
I had an opportunity of seeing this man, and examining the bone, on the 1st of April subsequently: the joint was healthy, and he had very good use of it, and could ride and walk quite well.

If I had to apply the seton in another case I should not allow it to remain for a longer period than perhaps ten days, that time being all that is generally necessary to produce a sufficient degree of inflammatory action in the fractured bone and the parts surrounding it. If the patient complains of pain in the part some days after the introduction of the seton, it is advisable to move it, by drawing it a little from one side to the other, and making gentle pressure along its course, as by this manipulation matter will get free discharge, and the pain be greatly tranquillized. It is most desirable to retain the starch bandage from the time the seton is introduced, and to avoid removing it for as long a period as it may be reasonably supposed the bone will require to become firm and united; this period depending on the bone that is broken, as some bones naturally require a longer time than others,—on the constitution of the patient, whether it be weakly, and tainted by disease, or vigorous and healthy,—on the age,—and on the directions prescribed being strictly adhered to. Circumstances may occur to oblige us to remove the starch bandage; if so, it should be done, if possible, without moving the fractured portions of bone, and it ought to be applied again as soon as may be.

I will not advance anything further in recommendation of the seton, as I consider its results in the foregoing cases sufficiently satisfactory to authorize its application in others of this class of injuries.

Case of badly united Fracture; Resection of Portions of the Bones; perfect Recovery without Deformity.

Andrew Redmond, aged 28, admitted 6th of July, 1841. Is unable to walk without great exertion and the use of a crutch, from an injury received three years ago. His right leg, as exhibited in the accompanying illustration(a), is bowed outwards at its lower third, so much so that the outside of the foot and outer ankle rest on the ground when he attempts to walk; for the last twelve months he has severe and constant pain in both bones of the leg, from the ankle to the knee-joint, and excessive neuralgic pains, extending from the sole of the foot along the leg and thigh to the lumbar and lower dorsal vertebræ. The injury was caused by a car running over the limb. Great tumefaction ensued in the ankle-joint, foot, and leg: the simple fracture was mistaken for a dislocation, treated as such, and both bones united firmly in the position above described. He is most anxious to have the deformity removed, and the use of the limb restored, at any hazard; or, if this can-



(a) There is a preparation in the King's College museum exhibiting the form of false joint exactly in the same position. See Druitt's "Surgeon's Vade Mecum," fourth ed. p. 230.

not be accomplished, he wishes the limb to be amputated, as it is useless to him, and the pain intolerable.

July 15th. With the hope of remedying those evils, I performed the following operation. Having placed him on a table, with the foot of the affected limb resting on it, and the leg flexed, I made an incision four inches in length, commencing two inches above the deformity, parallel to and behind the posterior edge of the fibula; this incision severed the connexions of the soft parts with the bone in this direction; a similar incision was made along the posterior edge of the tibia. Those incisions were connected inferiorly by a transverse one in front, passing through the skin and integuments; the portion thus incised was dissected up and formed a flap, which, being raised, exposed completely the deformed bones; a chain saw was then passed round the fibula, keeping close to it, in order to avoid the vessels, and the bone was sawed through above the deformed part, then below it in a similar manner; the piece was firmly attached to the angular portion of the tibia, and so not easily removed; the deformed portion of the tibia was removed in a similar manner. The limb was then placed straight, the extremities of the bones in apposition; the flap was drawn down, it covered the whole wound, and was united by a few points of suture; the limb was then placed in a case prepared for it, and the man put to bed: there was not a blood-vessel divided, nor was there an ounce of blood lost. This wood-cut exhibits the appearance of the portions of the removed bone.



Nine o'clock, P. M.—Has been pretty easy, but is much depressed; pulse 55, and small: ordered thirty drops of tincture of opium, and twenty-five of spiritus ammoniæ, in mint water.

July 16th. Nine o'clock, A. M.—Says he is pretty well; slept a little; looks fatigued; pulse 70, stronger, and more full; no complaint of the leg. Ordered tea, and an opiate at night.

17th. Complains of shooting pain in the wound; in other respects he is better: ordered a spirit lotion to the leg. Three of the sutures were removed. Opiate at night continued.

19th. The leg is a little inflamed round the wound; pulse 100; did not sleep well last night; is a little sick in his stomach. All the sutures removed: to have an aperient of compound infusion of roses, and sulphate magnesia; omit his opiate.

21st. Is much better to-day, bowels moved twice; pulse 80; slept without an opiate; to have mutton-broth for dinner.

23rd. Does not look well to-day; face a little flushed; pulse 100; tongue white and dry; is thirsty; has no pain anywhere; wound is suppurating a little, and the matter looks healthy. Ordered one grain of blue pill, and two of James's powder, every three hours; the effervescing mixture *ad libitum*; no broth.

24th. Feels better; skin moist; pulse 80; tongue cleaner; wound suppurating freely; the bowels were moved four times in the night. Omit his medicine, except the effervescing mixture.

26th. Doing well; a light bread and water poultice to be laid over the wound; to have broth, tea, and flummery.

30th. Doing well; part of the wound is healed, the rest is suppurating; food as usual.

August 2nd. Complains of great pain in his heel; the suppuration is very profuse; pulse 100, soft and small; perspired a great deal in the night over his face, neck, and arms; a slight hectic on left cheek; says he is very tired.

Ordered: Compound infusion of roses, with sulphate of magnesia, sulphate of quinine, and dilute sulphuric acid, thrice daily. A pad, hollowed in the centre, was placed under the heel.

5th. Much improved in appearance; pulse 70; perspirations on the face only; appetite good. Ordered a little broiled

meat for dinner, and a small glass of porter; his bowels are a little too free to-day. Omit his medicine.

8th. Felt quite comfortable since last report, until two o'clock this morning, when he became suddenly sick in his stomach and began to shiver; the shivering lasted for half an hour; his skin is now hot; face flushed; pulse 120; has had some startings in the leg; there is an erysipelatous blush round the wound and a little up the leg; discharge is scanty, thin, and glairy: the edges of the wound are puffed and glassy-looking; the flap is engaged in the inflammation. The wound was closely examined; there is not any deposition of matter. Ordered a grain of calomel and two of James's powders every third hour. Omit his meat and porter. Complains of intolerable pain in his heel, to which a piece of lint, kept wet with a solution of oxymuriate of mercury in spirits of wine and laudanum, has been applied.

9th. The erysipelas has extended to the knee, quite round the leg; the flap is of a dusky red colour, swelled and tense; the wound is dry; he complains of pain and starting in the leg; the starting frightens him so much that he fears to sleep; the bones are evidently quite moveable; he is very low; his countenance looks sallow, and has a greasy perspiration on it; his eye is languid; says he is tired; pulse 100, small and intermitting; slight nausea; bowels were moved twice in the night; tongue brown in the centre, but not very dry. Ordered the decoction of bark in a state of effervescence, an ounce every fourth hour. To have porter when he wishes for it; a vapour stupe to the leg, and the sound part adjoining the erysipelatous portion to be pencilled over with nitrate of silver; a person to remain beside the bed with his hand resting on the limb to control the starting; to have ten drops of black drop at night. The calomel and James's Powders were omitted at eleven o'clock last night.

10th. Much as yesterday; raves a good deal; mortification

has set in along the line of the incision, and the united part is separating. To continue his medicines, and have a glass of port wine occasionally; the fermenting poultice to be laid on the wound. As the larvæ of the house-fly appeared under the limb, the sides of the case were painted over with spirits of turpentine to destroy them. A blister to be applied to the region of the stomach for two hours.

11th. Is much sunken in appearance; tongue dry, brown in centre, edges red; pulse 100, very small and intermitting; a cold dampness on his skin; the mortification engages the greater part of the flap, and the lower margin of the wound looks sloughy; the nausea has ceased; has retention of urine. Erysipelas not extending, it has vesicated in a few spots; no starting of the limb. An ounce of the ammoniated tincture of bark every six hours.

Ten o'clock, P. M.—Feels a little better; pulse 110, and more regular; says he is so tired he cannot sleep; 40 drops of tincture of opium were given him in a wine-glass of port wine.

12th. Slept from half-past ten o'clock last night to six this morning; says he feels better; pulse 120, and regular; tongue brown and rough, with a slight appearance of moisture over its centre; the flap is sloughing. To continue his medicines.

Ten o'clock, P. M.—No change; his laudanum in the wine as last ordered.

13th. Slept well for seven hours; pulse 120, full; tongue not so brown, and more moist; bowels not moved since yesterday morning, at four o'clock, A. M. To have ten grains of compound colocynth extract, with one of capsicum immediately, and, as soon as his bowels are moved, to continue his other medicines. Repeat his wine and laudanum.

14th. Is decidedly better; bowels moved twice; has a little headach; omit his wine and bark, and repeat his aperient pills. To have some porter.

15th. Slept well; looks very much better; pulse 100, and regular; tongue cleaning and moist; a portion of the flap has

sloughed off, and exposed the bones beneath it; about the twelfth of an inch of the tibia, at its upper cut extremity, looks dry, and void of periosteum, as if it would exfoliate; there is a profuse foetid discharge, but no pain. I raised the limb from the box, and the back of the leg was dry and clean, but red from the pressure, and the cuticle scaling off from the erysipelas; the heel has not pained him since the use of the oxymuriate lotion. Ordered a thick fold of lint, steeped in the solution, to be laid all along the bottom of the box, and the limb placed on it. To continue his porter; to have some beef-tea, and his black drop at night; lint, wet with the chloride of lime lotion, to be kept on the leg.

16th. Still improving; to have broiled meat and wine and water to-day; his black drop at night.

19th. Has gone on gradually improving; eats, drinks, and sleeps pretty well; is very weak; the wound is suppurating freely. Ordered one grain and a half of quinine, and ten drops of diluted sulphuric acid; porter and meat daily.

25th. He is now considerably improved in health; the discharge is profuse, and granulations are appearing on the fibula; his pulse is 90, and he is greatly emaciated; he complains of the protracted confinement, and is beginning to despond; longs for his home. Ordered light nutritious diet and tonics.

September 1st. He is not cheery, and these last two days feels very weak, and has had perspirations in the morning over the upper part of his body; the hectic flush is on his cheek, his pulse is 100, and the discharge profuse; the fibula is granulating, and so is the tibia, above the exfoliating part; the lower extremities of the bones are invisible, as the soft parts have granulated over them; he is so restless that it is almost impossible to keep the bones *in situ*. Under all these circumstances I had a consultation this morning, and the result was, to propose amputation as the best chance of preserving his life.

5th. I told him to-day the decision we had come to: he

asked me to "wait a little, if I was not already tired of him." This accorded so well with the feeling of intense interest I had for the poor fellow, that I readily assented to his request, and did not urge the matter. Ordered to continue his diet and tonics, and his body to be sponged over, night and morning, with tepid vinegar and water.

18th. No great change since last report. He objects to take his medicines. Pulse 120. He is greatly emaciated; discharge not so profuse, and wound granulating; extremity of tibia visible, it protrudes up through the granulations. Ordered two drachms of powdered Cinchona bark in a pint of porter twice in the day.

October 1st. Nothing particularly interesting has occurred up to this day. He has been struggling on, living on tonics, wine, porter, and occasionally a little meat. To-day I find a bit of the tibia is moveable. I felt it with a probe at the posterior part of the bone; it is very deep, for the soft parts have formed well and firmly in the situation of the flap. He is a little irritable, and begs me to leave him alone to-day. Ordered a five-grain calomel pill to-night, and a saline aperient in the morning; a linseed-meal poultice to the wound.

5th. I removed a very small bit of bone to-day from the front of the tibia; it was loose, and came away in the forceps; and the deep-seated portion came away also; it was from the back of the tibia. About an ounce of florid-coloured blood followed the removal of the latter, but it was checked by pressing the popliteal artery steadily for about ten minutes. He is very faint and irritable. I gave him twenty drops of acetum opii in a glass of porter, and ordered him to be kept perfectly quiet; a fold of lint, wet with the spirit wash, to be kept on the wound.

10 o'clock, P. M. Slept all day, and says he was not so well these two months as he is to-night; no appearance of hæmorrhage in the wound. To continue the spirit wash, and give him some tea.

20th. Going on well; no cavity in the wound; it presents a surface of granulations; discharge diminished; complains of a very sore spot on his back; the soft parts on the sacrum are red, and very painful. Ordered the oxymuriate of mercury solution to be applied to it; he is to be raised up, and to sit supported by a bed-chair.

November 1st. His health is very much improved, his appetite good; wound looks healthy; the limb is becoming more firm; there appears to be a general regeneration of all the parts: it is still kept in the case, and every attention paid to keep it straight, in a state of perfect rest, dry, and clean.

20th. Complains of pain over the fibula, about an inch above where it was sawed; it is slightly inflamed, and the parts a little elevated; in other respects doing well. Ordered a linseed-meal poultice to the painful part.

December 3rd. There is a small abscess over the fibula at the painful part. I opened it to-day, and found a small spicula of bone in it. Ordered to continue the poultice.

20th. Doing well, and if he moves the limb in changing his position in bed, the motion of the foot corresponds with the motion of the knee; his ankle-joint is perfectly stiff.

January 5th. The wound is not healed. The limb appeared so firm to-day that I commenced moving the foot at the ankle-joint; it gave him excessive pain. I placed the limb on the inclined plane, and applied a splint to each side of the leg; the knee is very stiff and painful in motion.

7th. The leg and thigh are firmly bound on the inclined plane, the inclination of which is ordered to be altered several times in the day, so as to give motion to the knee; the foot to be moved frequently on the ankle-joint, but not by a rotatory movement.

February 1st. Every apparatus removed from the limb to-day; the wound is healed; the motions of knee and ankle-joints much improved, and he raised the leg half a foot from the bed

by its own muscular power; the inclined plane, splints, &c., were all replaced, and the leg bandaged from the toes to the knee.

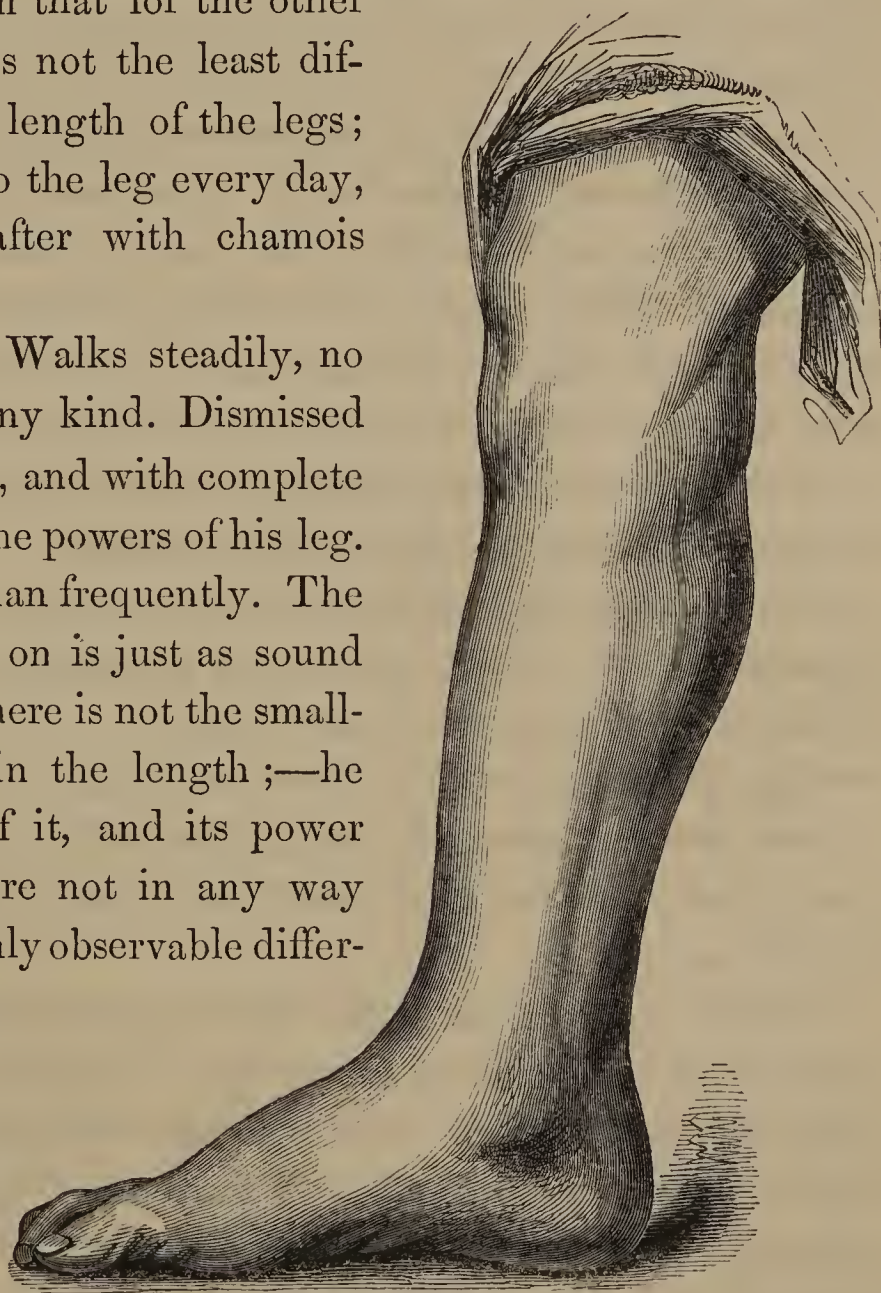
20th. The limb is now quite firm; the apparatus all removed; a bandage continued on, and the foot to be suspended by a broad strap from his neck; to go about with crutches.

March 1st. Walks pretty well with the aid of a crutch and a stick.

20th. Has dismissed his crutch and sling; walks steady and well; the shoe for this foot to be made with a broad heel, but not higher than that for the other foot, as there is not the least difference in the length of the legs; a cold *douche* to the leg every day, and friction after with chamois leather.

April 5th. Walks steadily, no complaint of any kind. Dismissed perfectly cured, and with complete restoration of the powers of his leg.

I see this man frequently. The leg I operated on is just as sound as the other; there is not the smallest difference in the length;—he has full use of it, and its power and strength are not in any way lessened; the only observable difference is, a slight prominence on the tibia from the deposition of the new bony matter.



The accompanying wood-cut faithfully represents the present appearance of Redmond's leg.

ART. VIII.—*Contributions to Midwifery*, No. VI.—*Cases of Retroflexion of the Uterus successfully treated*. By THOMAS EDWARD BEATTY, M.D., M. R. I. A., Professor of Midwifery to the Royal College of Surgeons in Ireland, Physician to the City of Dublin Hospital, &c.

[Communicated to the Obstetrical Society.]

DR. ASHWELL'S valuable Treatise on the Diseases peculiar to Women contains the following passage(*a*): "There is no doubt in the profession about the existence of procidentia, inversion, and retroversion of the uterus; but there are many practitioners who question whether the uterus is ever anteverted, anteflexed, or retroflexed. It is true that these states sometimes require nice diagnosis; that they are exceedingly uncommon; that in slight and even more marked degree, they may exist undetected; that they are rarely productive of serious symptoms; and that perhaps in few instances can they be said to have caused death; but still they exist; it is therefore important that they should be fully described."

The opinion expressed in the above passage has led me to communicate the following cases of retroflexion, an accident which is rare in occurrence, and produces a train of very distressing symptoms, many of them attendants upon other and various diseases of the pelvic viscera, but which, taken together, form a group sufficiently characteristic of this displacement of the uterus.

The first notice of this affection is to be found in Dr. Denman's Introduction to Midwifery(*b*). "Another complaint similar to that of which we have been speaking, and which has been called a retroflexion of the uterus, has occurred in practice. By this term is implied such an alteration in the position in the parts of the uterus that the fundus is turned

(*a*) Page 587.

(*b*) Page 78, sixth edition.

downwards and backwards, between the rectum and vagina, whilst the os uteri remains in its natural situation; an alteration which can only be produced by the curvature or bending of the uterus in the middle, and in one particular state, that is, before it is properly contracted when a woman has been delivered. A suppression of urine existing at the time of delivery, and continuing unrelieved afterwards, was the cause of the retroflexion of the uterus in the single case of the kind of which I have been informed by Dr. Thomas Cooper, and the symptoms were like those which were occasioned by the retroversion. When the urine was drawn off by the catheter, which was introduced without difficulty, the fundus of the uterus was easily replaced by raising it above the projection of the sacrum, in the manner advised in the retroversion, and it occasioned no further trouble." This is the whole of Dr. Denman's observations upon this subject. He had never met with the displacement himself, but had its description from another, to whom it presented itself in a very recent form, and in which instance, for that reason, the malposition was easily restored.

The part of the uterus at which this deflection takes place is that at which the neck and body of the organ join, and the angle at which the body is bent upon the neck varies, being sometimes very acute, and at others more obtuse. The displacement is most commonly the result of pregnancy; it could scarcely, if at all, occur during gestation, owing to the fulness and tension of the uterus during that state, but in all the instances that have come within my knowledge, or that I find recorded, the occurrence of the accident was subsequent to delivery. Velpeau(*a*) saw fifteen cases in which it occurred in the unimpregnated uterus, but after parturition. Dr. Davis(*b*) is of opinion that this incurvation may have occurred congenitally, as the effect of an originally imperfect development, or as a result of disease, either of the uterus itself, or of the organs

(*a*) *De l'Art des Accouchemens*, Bruxelles, p. 522.

(*b*) *Obstetric Medicine*, p. 589.

in immediate contiguity to it; but he gives no cases of either kind. This displacement is very different from retroversion, in which the os and cervix uteri are thrown upwards; whereas in retroflexion, these parts maintain their natural position, while the fundus is thrown downwards. Retroversion takes place when the uterus is distended by pregnancy. Retroflexion is peculiar to the unimpregnated uterus subsequent to delivery. They also differ in the nature and amount of the consequences that attend them; one, retroversion, involving the safety of the patient to a great degree, while the other is only productive of distressing local symptoms, not indicative of, or followed by danger. The only case of death with which I am acquainted is one recorded by Velpeau(*a*), in which the patient died at the end of fifteen years of insurmountable constipation.

The time at which this displacement takes place is most probably immediately after delivery, when the uterus is still large, but soft and pliable; it is, however, most likely to be overlooked at the time of its occurrence, because the very urgent symptoms do not manifest themselves until the woman rises from her bed, and resumes her usual occupations in the upright posture; then it is that gravity causes the pressure to be felt by the surrounding viscera, and the symptoms declare the nature of the malady. But it unfortunately happens, that often these sensations are endured for a long time without complaint, in the hope that they will subside as the woman regains her strength. The organ, by this delay, becomes fixed in its unnatural position; a certain amount of chronic inflammation alters its tissue, and moulds it into its new shape, rendering all attempts at restoration, by mechanical means alone, fruitless; and a case, which, if discovered in time, might have been easily remedied, becomes most obstinate. The case related by Dr. Denman, already quoted, describes the symptoms and appropriate treatment of retroflexion in its recent state; the cases that follow shew the displacement in its more common

(*a*) *Loc. cit.*

or chronic form. We should form a more favourable prognosis in recent cases, on account of the greater ease with which they can be rectified. The means to be adopted are those we employ to restore a retroverted uterus; and after the organ has been placed in its proper position, great care should be taken to keep the patient lying as much as possible on her face, until the uterus has shrunk to its original size.

Dr. Davis is of opinion, that cases of chronic deflections are to be considered as totally incurable by any efforts of art exclusively, without the aid of nature, as exerted during the changes and developments which are the special attributes of pregnancy. A similar opinion is entertained by many practitioners, and such will be most likely the case with all who confine their efforts at cure to mechanical means alone. The altered condition of the tissue and texture, as well as of the shape, of the uterus, must be attended to; and the chronic inflammation, which is the effect of the alteration in shape, and the cause of alteration in tissue, must be combated by appropriate treatment, before we can expect success in our attempts to restore the organ to its natural shape. Upon this theory the treatment of the following cases was founded:

CASE I.—A. M., aged 30, has had six children; complains of severe dragging pain in the loins, groins, and back, aggravated by walking or making any violent effort. She has considerable pain and difficulty in defæcation, and, during the attempt, she has the sensation of something blocking up the passage, and preventing the exit of the contents of the bowels. She has a good deal of irritability of the bladder, which causes her to rise frequently at night in order to relieve that organ. She states the menstrual function to be pretty regular as to time, but variable in quantity, and always accompanied with much pain; and she labours under rather profuse leucorrhœa during the intervals. On making a vaginal examination I found the os uteri occupying nearly its usual position, perhaps a little more inclined towards the pubes than natural; it was

enlarged, and tender to the touch. On carrying the finger along the back of the cervix, it soon encountered a prominent tumour, pressing the posterior wall of the vagina downwards and forwards, and evidently connected with the upper part of the cervix uteri, with which it made an acute angle, into which the finger could sink. On exploring the rectum, this round and hard tumour was found pressing into its cavity from before, and blocking up the area of the bowel. An examination of the os uteri, through the speculum vaginæ, disclosed that part of the organ swollen and congested, and superficially ulcerated. The patient dated her present state of suffering from a bad confinement of twins, which took place four years previously, and since which she has never felt well. She was a confidential servant in the nursery of a lady who had four young children, and she was, consequently, a great part of the day on her feet, and had to carry one of the children in her arms whilst out for their daily airing. This greatly increased her suffering, and at last her mistress applied to me about her, when I took her into the City of Dublin Hospital. I confined her closely to bed, and endeavoured to reduce the chronic inflammation with which the uterus was evidently affected. This was accomplished by means of leeching the os uteri, the warm hip-bath, mercury, and the injection into the vagina of plain warm water. Under this treatment the pain and uneasiness subsided. The ulceration was then attended to, and, by the application of a strong solution of nitrate of silver, it was gradually healed. No attempt had been made to restore the uterus to its original condition previous to the removal of the swelling and inflammation of the organ; for I was of opinion, that any force exercised in order to reduce the displacement, while such an unhealthy state continued, would only tend to produce further inflammation, while it would, most likely, fail in accomplishing what was intended. I was pleased to find, that as the size and painful condition of the uterus were lessened, the displacement of the fundus became less and less apparent, and at last, at the

expiration of three months from the date of her admission, the organ could be pushed fairly into the upright position without inducing much pain. There was, however, still a tendency to fall back whenever the patient stood or walked for any length of time. This was remedied by the use of a sponge pessary, with which she was furnished, and she finally returned to her master's house, where she is now employed in her former occupation of nursery-maid.

CASE II.—Mrs. T., a small, thin, delicate-looking lady, who I had attended in her two confinements, the last of which took place in September, 1842, consulted me in November, 1844, on account of very distressing symptoms, under which she had now laboured for many months. She complained of inability to walk, owing to the weight and dragging sensation experienced in the pelvis and loins. She also stated that there was a constant tenesmus, but, at the same time, a great difficulty in passing the contents of the bowels; and that, when the effort was made, it was constantly accompanied by a most violent pain in the epigastric region, compared to a tearing of the bowels from their proper place. She suffered from menorrhagia and leucorrhœa to a considerable degree, and was greatly worn down and emaciated.

A vaginal examination disclosed the cause of all her suffering. The uterus was found to be retroflexed, the fundus dipping down between the vagina and rectum, while the cervix maintained its usual position. Congestion and ulceration of the os uteri were present in this, as in the former case. This lady was not aware of any sudden invasion of her present malady, but stated that the symptoms had come on gradually, having commenced a few months after her last confinement. At that time she had had profuse uterine hæmorrhage, which required the most energetic measures for its restraint,—amongst others, strong and continued pressure upon the uterus; and, in reflecting upon her case, the question has arisen in my mind, whether such pressure, in a very thin woman, with a

very shallow pelvis, might not have contributed to the production of the present displacement. However that may be, more than two years elapsed between that confinement and my being called again to see her.

The horizontal position was strictly enjoined, with directions to lie as much on the face as possible; and, as great benefit had resulted, in the former case, from the local abstraction of blood, I applied a few leeches to the os uteri in this likewise. This was productive of a most serious result, for the leeches had scarcely dropped off, when the most violent flooding I ever saw, even in parturition, came on, and which I found it impossible to restrain without plugging the vagina very firmly and closely. The plug was removed the following day, and no further bleeding took place. The blood must have come from the cavity of the uterus, for the leech-bites could not have furnished the quantity that rushed from the vagina.

The ulcer on the os uteri was healed by the application of nitrate of silver and the injection of saturnine wash, and various attempts were made to restore the uterus to its proper position. It, however, seemed to be permanently fixed in its unnatural position, not owing to the resistance of any part of the pelvis, or to the existence of adhesions, for the whole organ could be freely moved up and down in its cavity, but by the parts having become accustomed to their new condition, and having grown in that position. Sponge, and globular wood pessaries were tried, with various results. At one time I made an effort to pass the uterine sound into the cavity of the uterus, in the hope of being able to elevate the fundus by that means, but the acuteness of the angle formed between the body and cervix formed an insuperable barrier to that manœuvre. A ring pessary of boxwood was found to give the greatest relief and support; and, after a confinement of two months to bed, she was able to go about with comparative ease. The bowels continued, as they had been all along, very costive, and she made use of the enema syringe daily with good effect. I had a confident

hope that, if she became pregnant again, a permanent cure of the displacement would be effected, provided that abortion did not occur, a circumstance very likely to happen, from the unnatural condition of the uterus.

I was well pleased to learn in the beginning of the year 1846, that my patient imagined herself with child, and in a short time it became manifest that she was so. Every precaution was adopted to guard against miscarriage, and happily with good effect, for the pregnancy went on without any unfavourable occurrence, and the lady's health and local symptoms improved as it progressed. She was finally delivered of a healthy child on the 6th of October, 1846.

Having been warned of her disposition to uterine hæmorrhage by what had occurred in her former confinement, and after the application of leeches, I took the precaution of giving her the ergot of rye, in the manner and at the time described in my former communication in this Journal, and she escaped without any loss on this occasion. She had been previously informed of my intention to keep her a long time in bed after her recovery, and she submitted to an imprisonment of two months with readiness. At the end of that time she was allowed to lie on a sofa, with liberty to sit up to her meals, and at last to walk quietly about her chamber. I examined the condition of the uterus at this period, and was gratified by finding it in its natural position. She was now allowed free liberty through the house; she is still nursing her infant, is free from all her former delicacy and uneasiness, and has grown fat.

CASE III.—I was consulted, for the first time, by a lady, aged forty-three years, the mother of several children. She stated that she had several miscarriages of late, between the third and fourth months of pregnancy, and was now apprehensive of a similar occurrence, as she was very near her usual time of abortion. She said she had suffered for a long period from great debility, and weight about the pelvis, and that

there was a remarkable protrusion into the vagina whenever she went to stool, giving her the idea that a large lump of fæces was arrested in the rectum, and was forced forwards by the effort to relieve the bowel. This prevailed to such an extent that she was compelled to apply her fingers to the part, and press the tumour backwards and upwards, when, as she imagined, the fæces took their proper direction, and a sufficient stool was passed. She had leucorrhœa to a considerable extent, occasionally tinged with blood, but no urinary distress.

I suspected the nature of the case, and an examination verified the diagnosis of retroflexion of the uterus, with ulceration of the os uteri. The organ was enlarged, perfectly moveable in the pelvis, but no reasonable amount of force could restore it to its natural position. Symptoms of abortion, as she anticipated, soon set in, and a fœtus of three months was expelled. The uterus now diminished in size, but still held its contorted position, and the same distress in defecation continued.

Attention was now paid to the ulceration of the os uteri, which healed rapidly under the caustic treatment, and she was instructed in the manner of using the sponge pessary made by enveloping a piece of sponge of a suitable size in a covering of oiled silk, fitting it loosely. A pessary thus prepared can be introduced with great ease by a patient, and removed by a piece of tape attached to the sponge. She was by this means enabled to resume her former position as mistress of her house, which she had been compelled to relinquish for a long time before; but she was unwilling to submit to the prolonged confinement to the horizontal position, and the application of leeches to the os uteri, which I informed her would be necessary in order to effect a complete cure.

This case, for the reason just stated, did not terminate as favourably as the other two; but it is interesting, as furnishing an instance of pregnancy occurring during displacement, and abortion being the consequence. If the habit of abortion had

not been established previous to my seeing the patient, there would have been a greater probability of gestation proceeding to the full period, when the displacement of the uterus would have been rectified.

In conclusion I would observe, that it is not unlikely these cases are more common than it is imagined; that the diagnosis from the symptoms, and from an examination by the vagina and rectum is not difficult; and that much benefit can be obtained by attention to the pathological condition of the uterus.

ART. IX.—*Practical Observations upon Pendulous Tumours; with Cases and Illustrations.* By J. M. O'FERRALL, M.D., M.R.I.A., &c., First Medical Adviser to St. Vincent's Hospital.

PENDULOUS tumours are met with in different regions of the body. Their nature may, like that of other tumours, be analogous to the tissues called normal, or it may be foreign to the organization. Thus far they admit of an arrangement in common with other growths to which the term *tumour* has been applied. They possess, however, some characters peculiar to themselves, and which, I believe, will render them sufficiently interesting as a subject of separate study. These characters depend partly on their peculiar form, their pendulous position, and the nature of their attachment, and, in a great degree, on the organization and functions of the part from which they spring.

There are other characters of pendulous tumours developed during their progress, and depending on certain morbid changes to which, in their nature, they are exposed, and which not unfrequently lead to groundless apprehension of their malignancy.

As this class of tumours has not been, as far as I know, separately investigated, and as the works of Abernethy, Bell, Lawrence, Vogel, Rayer, Alibert, and Warren, contain no more

special notice of them than is included in the description of a single variety (molluscum), I am induced to bring together a few of the most remarkable instances with which I have become acquainted in practice; and shall premise such general remarks only as may give an interest to their perusal.

The pendulous tumours which are found internally, and which have coverings derived from the serous or mucous membranes, have received more attention from pathologists. Much valuable information on the subject of their anatomy will be found in the works of Dr. Hodgkin; while the practical relations of the polypi of mucous passages are supplied by the best works on the diseases of the passages in which they are found. It is to those which originate in the dermoid, or subcutaneous areolar tissue, that the present inquiry will be confined.

ANATOMICAL CHARACTERS.

Of their anatomical characters, some are common to all tumours of this class, while others are peculiar to the situation of the morbid growth. A prolongation of the common integument, forming the pedicle, is expanded over the tumour, and is here either equal and smooth, or irregular and warty, according to the organization of the locality. The length of the pedicle is various: it appears to be, in a great measure, determined by the size and weight of the tumour; but the apparent length is deceptive, and is often much greater than the reality. This arises from the traction to which the skin surrounding the growth is subjected. The correction is easily made by poising the tumour on the hand. The skin immediately recovers its natural situation, and the actual length of the pedicle is seen. It will be observed hereafter that, in operating in these cases, it is desirable to establish this point, in order to avoid a cicatrix unnecessarily large.

Their colour and consistence depends in a great measure upon their internal organization. The organization of pendulous tumours is best seen in the larger varieties. A section of

the tumour and pedicle exposes the vascular arrangement, which is simple. When the pedicle is narrow, an artery and accompanying vein occupy a considerable portion of the thickness of the neck, and distribute branches through the bulbous portion of the mass. The artery is sometimes so large as to yield a pulsation equal to that of the radial of a child. The ramifications are extremely minute, and do not, as far as my experiments have gone, admit of very satisfactory demonstration by injection. It is difficult to accomplish the injection of the vessel, for the contraction of the skin, when the part is removed from the body, suddenly diminishes the volume of the tumour in a remarkable degree, and expresses the liquid contents of its cellular tissue. The pedicle which before operation was, perhaps, four inches long, becomes instantly shortened to an inch and a half or two inches, and recedes upon the surface of the tumour.

The vein is a simple cylinder, its radicles being, like the branches of the artery, exceedingly minute. I have examined these tubes carefully, but never could detect any structure analogous to valves. This is worthy of observation, as connected with the tendency to œdema and lividity which those productions, when of any considerable size, invariably exhibit. The circulation is less simple in the adipose variety of tumour. The pendulous nævus may also be supplied by more than one vessel. The same may be true of the pendulous tumour which has become malignant; but the arrangement will be found to depend on the breadth of its attachment to the surrounding parts.

The general appearance of the section of pendulous tumours is that of areolar tissue, more or less hypertrophied, and containing in its meshes a limpid secretion. The whole has a pearly or whitish semi-transparent appearance, when of the simplest kind. In the living state this section would, no doubt, be more or less vascular, and present a very different hue. The granulations which spring from these tumours, when

the skin has given way, have invariably the red, fleshy tint of a highly organized part.

To the tissues already named, and which constitute the simplest form of pendulous tumour, may be added others, which give it a special character. Thus the cellular tissue may contain adipose substance in quantity sufficient to give it the character of a fatty tumour. I have seen several examples of this kind, and shall relate the particulars of the most remarkable instances further on. The cellular tissue may be occasionally the basis of an accidental erectile formation. The tumour in such cases has the uneven purple colour of the *nævus*, and is capable of great reduction in its volume when compressed between the fingers. A section of these tumours shews the numerous apertures of vessels divided in different directions with respect to their axes.

When a tumour of the pendulous kind grows from the nipple or areola of the female breast, it will be found to include some elements peculiar to the part. The glandular follicles descend with the tumour as it grows, and form a part of its structure. These follicles become hypertrophied, and add to the volume of the growth. The growth of tumours springing from the areola is more rapid than that of others in the neighbouring portions of the female breast. I have not seen any pendulous tumour in the latter situations as large as those which are productions of the areola. I was consulted, last summer, by a lady from Clonmel: she had two pendulous tumours on the right mamma; both were, according to her account, on the part as long as she could remember. One was about the size of a small pea, soft, without colour, and suspended by a pedicle of extreme tenuity, growing from a point two inches distant from the nipple. The other was as large as a chesnut, brown in colour, and slightly irregular in its surface. The pedicle of the latter was thicker, and grew from the areola, quite close to the nipple.

The presence of the glandular and sebaceous follicles in

these tumours imparts to them other characters peculiar to themselves. Their surface becomes irregular; they are bedewed with a secretion which acquires a peculiarly fœtid odour if allowed to accumulate. Patients are so much afraid to touch or irritate these tumours, that the secretion alluded to is permitted to concrete on the surface, and form a kind of incrustation.

When the surface of the tumour is irregular, and when the hypertrophy of the follicles causes them to project, the whole assumes a warty appearance, each projection being coated by the concretion already mentioned, in quantity, slowly, but constantly, increasing, until it assumes an appearance resembling ichthyosis. These verrucous projections can be separated to the depth of two or three lines, the cleft being found moist, and emitting an offensive exhalation.

A section of a tumour of this description exhibits a remarkable lactescent whiteness in every part except at its margin, where the warty-looking prominences are found. This milky colour contrasts strongly with that of the simpler productions from other parts of the breast.

It is unnecessary to enter into a description of the pendulous tumour, in which malignant deposit has been formed. It is recognised by the same characters in every situation. I may, however, remark, that I have met but one variety of malignant growth (the encephaloid) in these tumours. I have not yet seen in them the schirroma, or hard variety of cancer.

MORBID ALTERATIONS IN PENDULOUS TUMOURS.

Pendulous tumours, nourished according to the same general laws which preside over other portions of the organism, are, like them, susceptible of the same morbid changes. Some of those changes seem to depend on the retardation of the circulation within the tumour, occasioned by their depending position. The arterial supply, by which its growth is promoted, increases with the volume of the tumour itself. There is no

impediment to its free ingress and diffusion through the mass. It is different with the returning current through the veins. There is not, as I have already remarked, any trace of that provision by which the venous circulation is supported against gravity in other parts. The enlargement of the tumour is thus accompanied by a disposition to congestion. The capillaries of both systems become dilated, and the surface acquires a purplish tint, in some places inclining to the arterial, in others to the venous hue.

Some increase of solidity is generally added to the other characters of the tumour at this period. This *induration* of the cellular tissue and skin is irregularly disposed, and (if the tumour be large) gives the surface an uneven figure, which may excite suspicions of a malignant taint. It is proper to mention this morbid change, although the experienced practitioner will have no difficulty in distinguishing, by the touch, the hardening here alluded to, from any more formidable degeneration.

Edema of pendulous tumours is another condition to which the capillary congestion almost inevitably leads. The surface of the most depending part gives a doughy sensation to the finger; and this infiltration of the cellular tissue is occasionally so great as to deceive the inexperienced, and lead to the opinion that matter has formed in the part. If the cellular membrane be of what is termed loose texture, this mistake is more likely to occur. I saw a lady some time ago, with a pendulous tumour growing from the right labium; it was the size of a large orange, and had a pedicle four inches in length. The bottom of the tumour was discoloured, and had the mark of a lancet puncture, made by a practitioner the day before, with the view of giving exit to matter. Nothing but serum, mixed with a little blood, had escaped. The tumour was removed at once, and no further accident occurred.

Suppuration will, however, take place in pendulous tumours exposed to much friction or injury. A gentleman consulted me on account of a tumour growing from the right natis, close

to the transverse fold. The pedicle was broad, and about an inch long, consisting of the surrounding integument, drawn down by the weight of the tumour. The fundus of the tumour had a small opening, through which pure pus was constantly oozing; a probe passed into this aperture could be made to move freely in a cavity an inch in depth. The remainder of the tumour was palpably of the adipose kind, some portions having undergone remarkable solidification. The whole mass was the size of a melon. It was easily removed. The cavity of the abscess was lined by false membrane, similar to that found in ordinary abscess.

Abrasion of the cuticle covering a tumour, in which œdema has been established, gives rise to some curious alternations of increase and diminution of its volume. The whole tumour becomes anasarcaous in many cases; and, when abrasion takes place, it is succeeded by an oozing of serum, resembling that which occurs from the legs of dropsical patients. The bulk of the tumour is rapidly diminished by the escape of this watery fluid. If the patient remains in bed, the part heals again, and the former size of the tumour is again reproduced. This alternation of increase and diminution has been described to me by several persons labouring under the disease.

Ulceration of the skin covering those tumours is deserving of especial notice, on account of the resemblance which the granulations occasionally bear to the fungus of malignant disease. The fundus of the tumour may exhibit in succession all the changes already described,—congestion, œdema, abrasion; and at length the entire thickness of the skin gives way. The granulations which are produced from this surface, irritated by the patient's dress, and congested from their position, present an aspect very different from that of granulations from any original portion of the organism. They are large, dusky red, easily made to bleed, and exhaling a very foetid odour. Their exuberance sometimes exceeds their vital power, and they slough and throw off a portion of their surface.

There is another morbid alteration to be remarked, and which should, when it exists, modify the mode of proceeding in the treatment, namely, hypertrophy of the pedicle.

Hypertrophy of the cervix of the tumour is sometimes observed to follow the general inflammatory state of the bulbous portion, produced by friction or irritation. I have observed this change most frequently in those which spring from the nucha, just below the occiput. The neck of the tumour becomes indurated and enlarged; its colour becomes vascular and dusky; and it is painful when pressed. This induration may take place without much discoloration, but it generally extends itself a little way into the surrounding skin. The tumour now seems to droop less, and the cervix appears to be more erect, and gives the idea of being shorter than before.

If the section of the neck of a tumour in this state be made in the manner suited to those with narrow pedicles, there is a probability of its being reproduced. The cicatrix left after the operation is more prominent and harder than the surrounding skin, and gradually becomes elevated into a new tumour. The management of this condition will be alluded to hereafter.

Independent of the more chronic alterations, this class of tumours may become the seat of acute inflammation. In a case of erysipelas, which spread over the chest of a lady, a pendulous tumour, the size of a filbert, growing from the areola, suffered in common with the neighbouring parts, and, possessing less vitality than them, sloughed in the progress of the case. In another case the tumour inflamed; bullæ containing a dark fluid formed on its surface; and a superficial ulcer remained on the subsidence of the attack.

The preceding remarks, given with as much brevity as possible, will now be illustrated by cases, arranged, for practical purposes, according to the region in which the tumour is found.

CASE I.—*Pendulous Tumours on the Face ; Operation.*

John Kearney, two years old, was brought to St. Vincent's Hospital 8th June, 1839, on account of vomiting and diarrhœa. It was observed that two small pendulous tumours existed on the left side of his face. One was about the middle of the cheek, the other just in front of the ear. In colour they resembled the surrounding skin. The bulbous portions were soft and fleshy to the touch. The pedicles seemed to consist of a mere prolongation of the skin in a state of great tenuity, and, although the tumours were not larger than small peas, appeared to have been subjected to some degree of traction, the length of the neck being a little shortened by raising up the tumour itself.



The mother stated that she had seen those tumours immediately after the birth of the child. They were then very small, and had since grown considerably. The only inconvenience produced by them was the consequence of accident. On one occasion the tumour near the ear was torn by a pin, and bled for some time afterwards.

The diarrhœa being cured, the pedicles were divided with a pair of small scissors; a smart oozing of blood followed, and resisted pressure made by the point of the finger; a slight touch of the solid nitrate of silver at once arrested it: a morsel of the wool of lint was laid on it and allowed to adhere.

In six days the lint had fallen off, and the surface was found to be cicatrized, leaving a scarcely perceptible mark.

When cut into, those little tumours exhibited a surface moist with serous exudation. When dried, this surface presented a pearly colour, and the substance of the little tumour appeared to consist of cellular tissue, without any appearance of fat. An additional escape of serosity took place when the

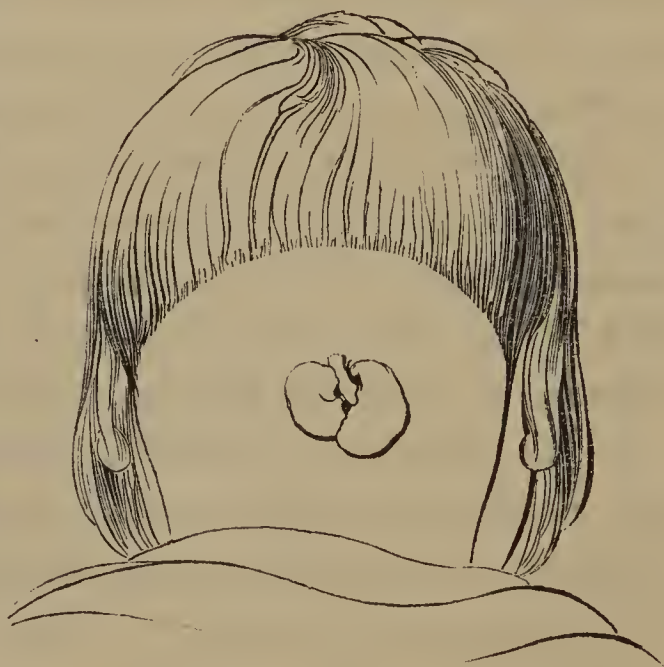
tumour was pressed between the fingers, and the cellular tissue appeared then to have a firmer consistence.

This case is an example of the simplest and most common form of pendulous tumour. In the present instance, the tumour, though still very small, had grown with the growth of the child. This is not always the case, for the tumour sometimes appears to enlarge very little as the patient advances in life. It is an example of the cellular tumour, in which the fibro-cellular change was very faintly marked.

The simple section of the pedicle, in this case, was followed by a trickling of blood, which suggested the expediency, in subsequent cases, of including the pedicle in a ligature before its division.

CASE II.—*Pendulous Tumour, with narrow Pedicle, from the Back of the Neck ; Ulceration ; Fungoid Excrescence ; Operation.*

Margaret Cullen, twenty-two years of age, was admitted into St. Vincent's Hospital, in March, 1845, with a pendulous tumour from the back of the neck. She stated that, about four months ago, she discovered a small tumour, which she called a soft wart, growing from the back of the neck, where it joins the hairy scalp. It was the size of a large garden pea when she first noticed it. It had, on several occasions since that time, suffered from injuries and abrasions, from being caught by different articles of her dress, and then always swelled and inflamed. Latterly it became much larger, and began to discharge a liquid, which made it adhere to her shawl. These



additional inconveniences induced her at length to seek advice.

The appearance of the tumour, which was about the size of a walnut, was that of a fungoid excrescence, with apparently a broad attachment to the skin. The prominent portion of the tumour presented a thin slough, and the whole mass was bedewed with a remarkably foetid discharge, which excoriated the surrounding integuments. A vertical fissure, which passed to the depth of half an inch, separated the mass into two lobes. On drawing forward the tumour between the fingers, it was found that the attachment to the skin, and which gave it on first view the appearance of having a very broad base, consisted, in reality, of a very narrow pedicle. The integument covering this pedicle could be traced from the surrounding integument, down upon the tumour, for about a quarter of an inch, where it was gradually thinned and lost. At this part it was that the bulb of the tumour appeared to have ulcerated, and given rise to the granulations, which, as already described, had assumed the bilobate form.

The tumour was drawn forward gently by an assistant. A silk thread, waxed, was tied round the pedicle, and below this point the part was divided with a knife-edged scissors. The ligature was removed on the following morning. The little wound was lightly touched with nitrate of silver. The part healed readily.

A portion of the granulations of this tumour was placed under the microscope by my friend, Dr. Aldridge, whose experience in microscopical inquiries justify my confidence in his report. He says: "None of the characters of malignant structure were present in this tumour." The recent parts were exhibited at the Pathological Society.

The patient recovered perfectly, and had not, when seen twelve months after the operation, the slightest appearance of a relapse.

This remarkable tumour was evidently not congenital. The

patient was very clear on this point. The bilobate appearance is a curious feature in the case. The situation of the tumour made it impossible for the patient to be certain, whether the "soft wart" had originally a bilobate form, or whether this conformation was acquired after the skin had given way. The exuberance of the granulations, their disposition to slough, and the very offensive discharge which bedewed them, gave the tumour very much the character of a malignant growth. The appearance of the tumour on section, as well as its microscopic anatomy, removed this apprehension. The healthy aspect of the young woman was an additional source of confidence on this point, which the history of the case, since the period of operation, appears to set at rest.

The provisional ligature of the pedicle was found a convenient mode of preventing annoyance from hæmorrhage, and as the ligature was removed as soon as the vessels were supposed to be sealed up by lymph, its employment was productive of no inconvenience.

CASE III.—*Pendulous Tumour, with broad Pedicle from Back of Neck; Ulceration, with Granulations of a fungoid aspect; Operation by elliptic Incision.*

Jane Kelly, aged 30, was admitted into St. Vincent's Hospital July 8, 1838. She was unmarried, menstruated regularly, and had enjoyed tolerable health until March last, when she caught cold, and since that time suffered occasionally from diarrhœa and bronchitic attacks alternately.

The object of her present application was the removal of a tumour on the back of the neck, of which the following were the appearances :

The bulb of the tumour was about the size of a small plum ; it consisted of a mass of granulations sprouting from a pedicle, which grew from the back of the neck, about an inch below the hairy scalp, and three quarters of an inch to the right of the mesial line. The surface of the bulbous portion was ren-

dered rather smooth by the pressure of the dressings and bandage constantly applied by the patient. Its colour was a bright red, and from two or three fissures, which passed to the depth of a quarter of an inch into the tumour, exuded a foetid discharge. The cervix of the tumour was much thicker than is usual in such cases; its circumference was an inch and a quarter. It was covered by integument which was lost on the bulbous portion, but its cuticle was softened, and almost excoiated, by the irritating discharge which issued from the ulcerated bulb beyond it. The consistence of the whole tumour and its neck was fleshy. It was neither gristly nor medullary to the touch; and the term *fleshy* seems to express the sensation which it gave to the fingers when handled. The thickened state of the cervix prevented the bulb of the tumour from drooping much; it gave it the appearance of standing erect from the skin around it.

The account given of this growth by the patient was, that a "small lump was there from her infancy; that it was soft, and had a small stalk at first, but that it was often inflamed by being rubbed, and became larger, and then discharged matter.—This latter condition was of two years' duration. She concealed this annoying com-



plaint, by wearing a high dress, as long as she could, but at length determined to seek advice, although she dreaded any operation."

There was no induration or unhealthiness in the surrounding skin; no enlargement of lymphatic glands in the neck; and, with the exception of the affections of the mucous surfaces alluded to, there were no other evidences of disease.

Accurate drawings of the parts in this and the former cases were made by Mr. Neilan, and from these, wood engravings by Mr. Oldham.

Guided by the result of a former operation on a tumour of this kind, with thickened cervix, and in which reproduction of the growth followed simple amputation of the pedicle, I determined to remove an elliptical portion of the healthy integument with the tumour.

The bulb of the tumour being drawn forward by the left hand, I included its point of attachment in an elliptic incision, and with two strokes of a pointed bistoury removed the whole. The edges of the wound were easily brought together with adhesive plaster, and healed by the first intention.

A section of the tumour and its cervix shewed a smooth, uniform structure. The surface being wiped, and the tumour squeezed between the fingers, no oozing of creamy fluid, like that seen in malignant structures, took place; it appeared to be a mere fibro-cellular thickening, the result of irritation.

It is now nine years since the operation, and there has not been any reproduction of the tumour.

This case presents a remarkable contrast to the one preceding it. A pedicle of remarkable thickness is found to support a tumour which, on careful section, differs in no respect from that in the preceding case, where the pedicle was narrow and delicate. It is probable that the irritation to which this tumour had been exposed occasioned a chronic inflammation, which extended to the cervix, and gave rise to its enlargement. The germ of this tumour existed from infancy, and probably from birth; but the characters it presented on her admission into hospital were clearly the result of the friction which it suffered at a later date. The ap-

pearance of the tumour on section, as well as the length of time that has elapsed since the operation, are satisfactory as to the question of malignancy. The only case I have met with resembling that now related, is one published by M. Velpeau, in the *Archives Medicales* for 1826, as a "*tumeur speciale de la peau*." In his case the tumour was not, as in this instance, solitary.

The operation in this case, it will be observed, was more extensive than that of the preceding; but experience had made me aware of its necessity. Independent of any apprehension with respect to its malignancy, the wound from simple amputation of the neck could not have been expected to heal readily; and its hypertrophied and vascular state would most probably have laid the foundation for an unsightly protuberance. I have no longer any doubt of the propriety of removing the entire cervix in such cases.

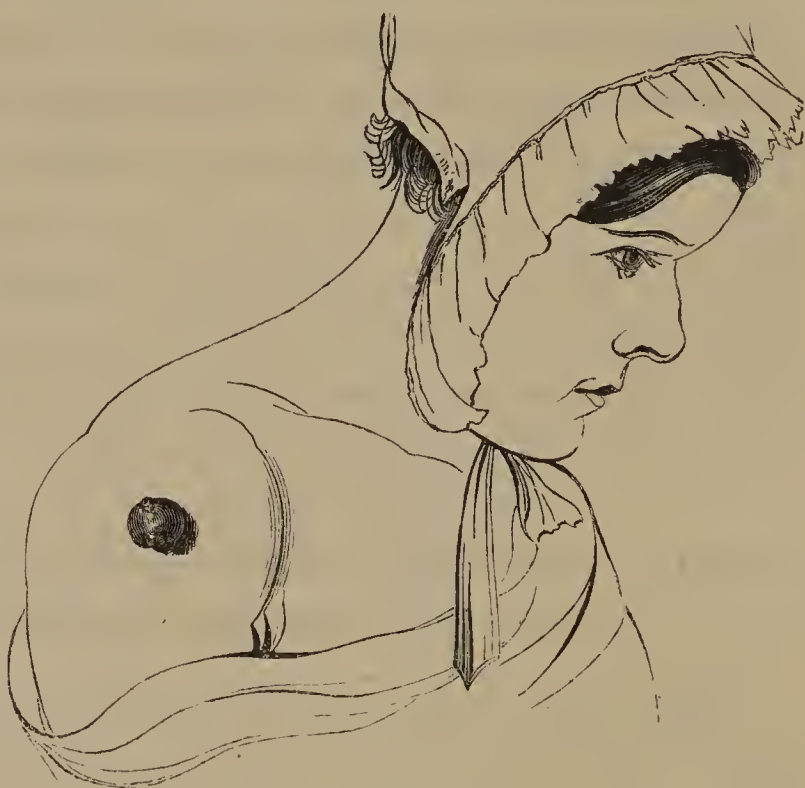
CASE IV.—*Pendulous erectile Tumour over the deltoid Muscle; Operation; keloid Tumour of the Cicatrix.*

Mary Byrne, aged 26, was admitted into St Vincent's Hospital on the 11th of April, 1842, on account of a tumour, about the size of a large grape, situated over the deltoid muscle, about an inch below the acromion process. The colour was irregularly distributed, some portions being of a deep purple hue, others more faintly tinged. A few slight elevations marked its deviation from the spherical form; those prominences were of the deepest purple colour. The circumference of this little tumour, at its bulbous part, was two inches and a quarter; where it joined the skin of the arm it became narrower, and here its circumference was only one inch. The colour of this cervix was less purple than that of the tumour, but strongly contrasted with the surrounding parts. When taken between the fingers the tumour could be rendered flaccid by pressure, and it lost the purple colour. Both colour and

volume returned in a few seconds after the pressure was removed. No pulsatory or other movement could be detected by the most careful manipulation.

She stated that a small purplish elevation existed for many years in this situation. She considered it to be what is termed a mole, and gave it no consideration, until it began to enlarge, and catch in her dress. Its increase has been steady for the last twelve months, and it bled a short time ago on being accidentally pricked with a pin. She was, therefore, anxious to have it removed.

On the 14th of April the operation was performed in the following manner :

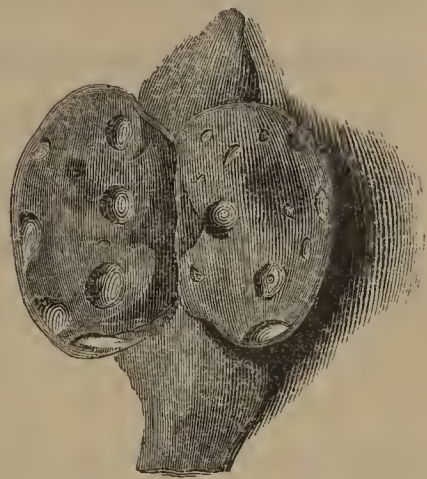


The tumour being held by the fingers of my left hand, I made a semilunar incision through the integuments on the outside of the tumour, about half an inch beyond its point of attachment. This portion was then caught by a double hook, and drawn to the outside or dorsal aspect of the shoulder. Another semilunar incision on the inside now completed the ellipsis, and the tumour was at once detached. It was remarked at the time, that, although no vessel required a ligature, the oozing from innumerable pores on the surface of the wound was in greater quantity than is usual after the removal of tumours of less vascular structure.

The parts were brought together by adhesive straps, and healed by the first intention.

A section of the tumour exhibited the appearances tolerably well represented in the annexed wood engraving.

The surface of the section presented several cavities lined by a smooth, shining membrane. On tracing those cavities with a fine probe, it was obvious that they were sections, in different directions, of tubes, which, however, owing to their tortuous shape, could not be followed far. The surrounding cellular tissue was spongy,



and yielded on pressure a slight sanguineous oozing. When examined with a lens of some power, a number of small canals could be discovered. There remained no doubt that the tumour was one of vascular hypertrophy, in which the veins were principally engaged.

The subsequent history of this case is interesting, and, although belonging to another branch of inquiry, may be briefly noticed here. Four months after the operation described, this young woman returned, complaining of some pain in the cicatrix. This part was found, on examination, to have enlarged considerably, and occupied a space of three-quarters of an inch broad, by which the original lines of incision in the integument were now separated. The cicatrix, besides being broad, was also elevated at its middle, and was covered by a smooth, shining cuticle, through which a number of minute arborescent vessels were to be seen. It was, in fact, an example of the degenerescence termed *keloides*, by Alebert, Rayet, and Warren.



The whole of this cicatrix was removed by a free, large, elliptic incision, and the parts healed very well.

From the appearances already described, the structure of this tumour was sufficiently manifest before operation. A nævus assuming the pendulous form is an exception to the rule usually observed by those productions. It will be seen hereafter that a much more formidable character may be imparted to a tumour of this kind by the deposit of malignant structure. It is a form of tumour which requires to be freely removed, and the disposition to hypertrophy of the vascular apparatus was in this instance evidenced by what took place in the cicatrix.

CASE V.—*Small pendulous Tumours on the scapular Region; Operation.*

Anne Farley, aged 43, applied at St. Vincent's Hospital on account of bronchitis. In the course of examination of her chest it was observed that two small pendulous tumours hung from the integument of the left scapular region, and another from the back of the arm, near the shoulder-joint. They were all about the same size, that of a large pea; but their shape was pyriform. The colour was that of the surrounding skin, with a slight blush of red about the fundus or most depending part; the pedicle was very small and delicate. The consistence of the tumours was fleshy, and their bulk admitted very little diminution on pressure between the fingers.

These tumours had scarcely undergone any increase of size for many years. She could not remember a period when they were not to be felt as at present. They produced no other inconvenience than that of being now and then caught and bruised by her dress. She was anxious, however, to get rid of them, when informed that it could be done with safety.

The little growth on the back of the shoulder was removed with a pair of scissors. The oozing of blood was so free, that, previous to removing the two others, I included the pedicles



in fine silk threads, tied just so tight as to prevent bleeding, when the tumour was cut off below the knot. The ligature was removed in three hours afterwards. A morsel of lint was placed on the spot, and retained by adhesive plaster.

The tumours, which became blanched immediately after being removed, exhibited on section a smooth surface, consisting of a little cellular tissue included in the duplicature of skin.

No inconvenience followed the operation, and the part healed in a few days.

These tumours, evidently congenital, resembled in all respects those described in the first case, as occurring on the face of the child. It was remarkable that, although the patient had reached the middle period of life, the tumours were still as small as they had been in infancy; and the cellular tissue of which they were composed was scarcely more dense than that in the other case.

CASE VI.—*Large pendulous Tumour, attached to the left Side of the Abdomen and Loin; Morbid Changes in the Tumour; Operation.*

Catherine Murphy, aged 32, was admitted into St. Vincent's Hospital, 13th of September, 1841, on account of a large tumour which grew from the left side. The tumour had a broad attachment beginning at the left loin, about a hand's breadth from the spine, and extending forwards on the abdomen for about five inches. The integuments were drawn down by the weight of the mass, so as to constitute a short but distinct pedicle, which became narrower as it descended, and then expanded over the fundus of the tumour, which measured at the latter part seventeen inches in circumference. The consistence of the mass was unequal. Its upper and middle portions were soft, elastic, and what is termed woolly to the touch, giving satisfactory evidence of its adipose nature. The lower portion of the tumour was unequally hard. The induration was very remarkable, when pressure was made deeply, in some

places, through a stratum of œdematous infiltration more superficially situated. The fundus of the tumour had a few dilated veins, and its surface was dusky red, contrasting with the natural colour of the skin covering the remainder.

The diagnosis of fatty tumour was at once registered, although the exceptional features of the case were clearly recognised. The obvious and familiar characters of the tumour, at its upper and middle



parts, were not nullified by the peculiar condition of the fundus, since the mechanical position of the whole growth was adequate to their explanation.

The account given by the patient was, that, ten or twelve years ago, she remarked a fulness in the part. She was then becoming fat, and only thought that one side was a little more fleshy than the other. About four years ago the part began to hang down, and since that time enlarged rapidly, and acquired its present size. On several occasions the tumour became sore and inflamed, from injury, and a certain degree of feverishness accompanied those attacks.

The removal of the tumour was determined on in consultation. There was not sufficient reason for presuming the existence of any malignant deposit, but the morbid changes already effected by time forbade any further delay in operation.

On the 18th of September, the patient was brought to the theatre, and placed recumbent on the operation table. The tumour was held up by an assistant, while I included its neck in an elliptic incision, exposing the delicate capsule which invested the adipose substance at its root. The whole of the morbid growth was thus easily and rapidly turned out.

Several vessels sprang, and required ligatures. The wound appeared very large when the skin had retracted, but a slightly inclined position of the trunk permitted the parts to be drawn together. The healing process took place by granulation, without any untoward occurrence.

A section of the tumour displayed a well-marked instance of fatty tumour. The adipose substance was continued through the cervix a short way into the cellular tissue of the loins. In this portion, as well as in the superior and middle portions, the fat was of the soft structure usually met with, and the containing cells were large and composed of very fine cellular tissue. At the fundus, and corresponding to the indurations before alluded to, the fat was firmer, and the cellular tissue more condensed, approaching the character of fibrous membrane: the properties and appearance of adipose matter were, however, unequivocal throughout. The whole mass was enclosed in a capsule of fine cellular membrane, which sent processes, conducting the vessels into its interior.

As a case of adipose sarcoma, this tumour presented some phenomena worthy of remark. In the first place, there were a number of irregular indurations, of scirrroid density, which were calculated to suggest the idea of malignancy. Secondly, there were a number of large veins ramifying over the surface, in the manner usually seen in fungoid tumours. Thirdly, there was an anasarca condition of the subcutaneous cellular tissue, which caused more than one person who examined it to suspect the existence of matter.

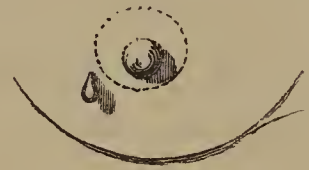
The first of these phenomena, however, could be accounted for by the probable hypertrophy and induration of the cellular membrane, occasioned by repeated contusions, together with the congestion of the capillary system from gravitation; the second, or superficial varicose condition, was, perhaps, a corollary of the former, and arising from stasis of the venous blood in a large and depending tumour; and the third seemed analogous to the œdema of varicose limbs, or that observed in the extremities in

certain cases of cardiac obstruction. From these considerations, the adipose character of the tumour was recognised through the obscurity occasioned by morbid changes, to which time and repeated injury had given rise.

The mode of operation in this case was that adapted to the removal of fatty growths, wherever situated. It is obvious, from all the circumstances of this case, that the operation could not be with propriety any longer postponed.

CASE VII.—*Small pendulous Tumour beyond the Areola of the Female Breast; Operation.*

Margaret Rich, aged 50, applied at St. Vincent's Hospital on the 19th May, 1847, on account of a tumour in the axilla, and at the same time shewed a small pendulous tumour growing from the integuments of the right mamma, about half an inch on the distal side of the areola. The tumour was about the size of a pea, soft and fleshy, and supported by a delicate pedicle about an eighth of an inch in length. The skin of both bulb and pedicle was pale, like the surrounding parts. She could give no account of the date of this little production, and believed that it occupied its present situation as long as she could remember. No inconvenience was experienced in the part, and it had escaped hurt or injury. She expressed a wish to have it removed.



On the 21st of May a fine silk thread was tied (but not tightly) with a slip-knot round the pedicle, close to its attachment to the breast. The tumour was removed near to the ligature. No oozing of any kind took place. The tumour exhibited, on section, a margin of common integument; next to this a slight blush of vascularity; and, in the centre, a white disk composed of cellular tissue, very slightly condensed.

The slip-knot was untied the next morning; the cut surface appeared dry and shrunken. The spot was cicatrized, so as to be nearly invisible in a few days.

This is the simplest form of pendulous tumour, and was, most probably, congenital. The size, if it had ever undergone change, was not perceptibly altered from the time the patient was capable of observing it. It had never encountered injury or irritation, and, consequently, had no stimulus for increased nutrition or hypertrophy.

The next case is different from the preceding, in its site, size, and its having suffered certain morbid changes.

CASE VIII.—*Pendulous Tumour from the Areola of the Female Breast; Operation; Fibro-cellular Structure.*

Ellen Jones, aged 28, admitted into St. Vincent's Hospital on the 11th of February, 1838. She was married, had two children, and was now three months pregnant. She sought advice on account of a tumour the size of a large grape, which grew from the areola, about half an inch from the base of the nipple.

The tumour was tolerably smooth on the surface, and was without cuticle at its fundus, which was constantly bedewed with a serous secretion. Its colour was a dusky red, inclining to purple. It was suspended by a pedicle of a reddish hue, extremely delicate in consistence, and about half an inch in



length. The consistence of the tumour, though not hard, had the firmness of a fibro-cellular structure.

She stated that this tumour began to grow shortly after the birth of her first child. It very gradually increased, and had attained about half its present bulk at the period of her second confinement. During the nursing of this second child, the tumour was subjected to repeated injury, by the infant grasping it for an instant between its lips, and thus causing it to bleed.

Its growth then increased remarkably, although she took great care to protect it from the child, by drawing it on one side when he was about to suck. She dreaded so much a repetition of this inconvenience after her next confinement, that she determined to have it removed. Her health was good in other respects, and there was no enlarged lymphatic in the axilla, or elsewhere.

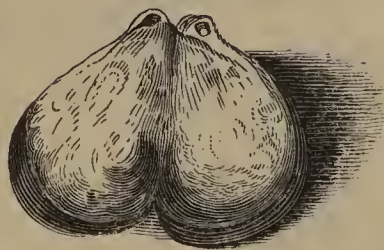
During the few days she was in the hospital, before operation, the tumour suffered a contusion, for which she could not account, except by supposing that she bruised it by turning in the bed. The bulb of the tumour was ecchymosed, and at one point the cuticle was elevated into a bulla containing a very dark-coloured serum. A cold bread and water poultice removed this condition, and reduced the tumour to nearly its former state.

The tumour was removed in the following manner: the pedicle was included in a fine silk ligature, and divided below that point; the cut surface was touched with nitric acid; the ligature was removed in a few hours, and the part covered with wetted lint. In a few days the spot was perfectly healed, leaving no mark whatever.

A section of this tumour had a glazed and watery surface, somewhat resembling the section of a peach. The colour was a greyish white, except towards its periphery, which was still ecchymosed for the space of two or three lines, exhibiting

the consequences of previous contusion. A single artery supplied the tumour with blood.

This production of the skin of the areola probably included some portion of the structure peculiar to that part. Its enlargement was evidently accelerated by mechanical injury during lactation, a period when the organization and vascularity of this part was in a state of excitement. Its pedicle was, notwithstanding, as delicate as that of a congenital pendulous tumour. Its structure was fibro-cellular, the cells containing a large proportion of serous fluid, but manifesting no trace whatever of malignant deposit.



CASE IX.—*Remarkable pendulous Tumour, growing from the Side of the Nipple of the Female Breast; Operation; peculiar Structure.*

Ellen Hardy, aged 27, unmarried, requested my advice on account of a tumour growing from the right breast. Its point of attachment was close to the nipple, on its outer side, and it carried along with it the peculiar integument of that part. The pedicle was about two inches in length, and of a dusky red colour. It was funnel-shaped. It was half an inch in circumference at its upper part, and very near an inch below. From this part it suddenly expanded into a tumour five inches in circumference, of extremely irregular figure, presenting clefts and elevations, and having very much the appearance of a walnut-shell, but fully double its volume. The colour of the tumour was a pale grey on the prominences; in the clefts it was a dark grey, and here a sebaceous secretion of remarkably foetid odour was accumulated. This foetor was, to the patient, a greater annoyance than the bulk of the tumour itself. The consistence of the tumour was fleshy and equal; that of the pedicle was

softer, and in it the pulsation of a very small vessel could be distinguished.

She stated that this tumour had been observed before the period of menstruation, and that its increase in size since that time had been progressive. She had some trouble to prevent its being injured by her dress, and was hitherto most anxious to conceal it. The principal un-

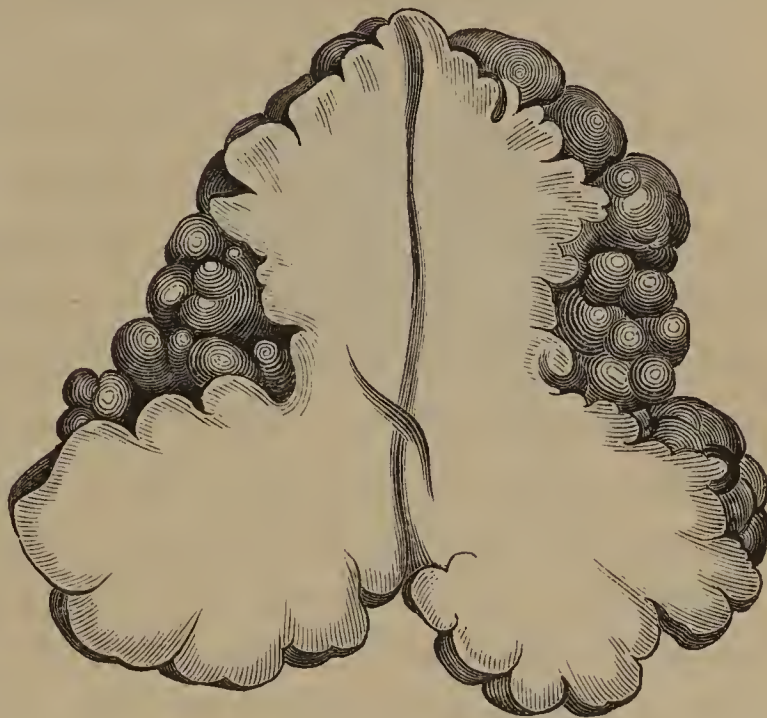


easiness it occasioned, however, was that arising from the offensive odour of the secretion which constantly bedewed the fissures of the tumour.

A drawing of the parts, before operation, was made by Mr. Neilan, and an engraving, an impression of which is annexed, was subsequently executed by Mr. Oldham.

A silk thread was applied round the pedicle, a short distance from its attachment. The thread was tied with a degree of tightness barely sufficient to prevent the escape of blood from the vessel. The pedicle was then divided, and the cut surface touched with nitric acid, which caused very little, and only momentary pain. The ligature was removed at the end of six hours. No oozing whatever of blood took place. The part was covered with lint, moistened with cold water. It was completely cicatrized in a few days, and left no trace of its existence in the breast.

The tumour was exhibited at the meeting of the Pathological Society held the same day. Its section displayed a remarkably smooth and uniform structure, of a milk white colour. Towards the margin of the section, and in the situation of the prominences, the colour deepened into a brownish grey tint. Pressure on the tumour caused the escape, in extremely small quantity, of a liquid having a serous appearance, and bearing no resemblance to the creamy fluid of a malignant tumour. The microscopic appearance of the structure was also considered satisfactory on this point.



The origin of this tumour appeared to be owing to hypertrophy of some of the follicles in the neighbourhood of the nipple. Having once become pendant, the cellular tissue became the seat of a similar hypertrophy, necessary, perhaps, for the support of the increasing weight. The peculiar secretion, which was the source of such annoyance to the patient, issued, most probably, from the follicles alluded to, as well as from the sebaceous follicles common to it with other parts of the skin.

The temporary ligature of the cervix was useful in preventing the troublesome escape of blood, and, being removed at the period when contraction of the vessels might be supposed to secure the patient from hæmorrhage, did not give rise to any of the inconveniences belonging to the sloughing process. The touching of the cut surface with nitric acid contributed also to the same result. The practice appears, according to my experience, to lessen the liability to inflammatory reaction in the divided tissues.

CASE X.—*Large pendulous Nævus, growing from the left Lumbar Region and Side of the Abdomen.*

James Canton, aged 16, was admitted into St. Vincent's Hospital, August, 1847. His complexion was pale, but not sallow or unhealthy, and his muscular system was well developed. He was brought to the hospital on account of a large pendulous tumour occupying the left side of the abdomen and loins, and hanging downwards for eight inches from its line of attachment towards the crest of the ilium, which it reached. The thickness of this growth at its fundus or lower part, when held between the finger and thumb, was about an inch and a half. Higher up its thickness was not so great. The colour of this tumour, in the posterior four-fifths of its extent, was a bright and not very deep purple colour. The anterior fifth of the flap had the natural colour of the skin. The line of demarcation between those two portions was irregular, but very well defined. The integuments of the loins higher up, and of the chest and abdomen in front of the tumour, presented irregular elevations of a purplish colour, the tint in some spots being very deep. The consistence of the tumour was rather soft, admitting of its being bent or folded in any direction; but this consistence was mingled with innumerable nodules, of almost cartilaginous hardness, dispersed through its interior. Many of those nodules appeared to be connected by short cylinders nearly as hard as themselves, and some of the elevations were perceptible to the eye, giving the integument a coarse and irregular surface.

His father stated that, when the child was two years old, a small mole, about the size of a pea, and of a reddish purple colour, was first observed about an inch to the left side of the lumbar spine. In the succeeding ten years its increase was very slow. At the end of that time it had attained the size of a shilling. Subsequently other small swellings appeared, extending in the direction of the abdomen, and, coalescing by degrees,

formed a large discoloured prominence, which began to descend by its own weight. The bulk of this pendent portion now augmented very quickly ; the skin became rough, thickened, and discoloured, like the other tumours, and by degrees assumed its present shape.

A careful examination of this tumour was sufficient to establish its nature, although it had undergone, in some places, a material change. If any doubt could be entertained it was easily removed by reference to the obvious characters of nævus presented by those portions of the disease which extended towards the anterior portion of the abdomen. It was clear that the



pendulous growth had undergone solidification in parts, and that the calibre of the vessels had been, in a great degree, obliterated.

Although this large flap is a source of great inconvenience to the patient, it has not been deemed prudent to amputate it without insuring the complete obliteration of its vascular structure where it joins the trunk. This object, it is hoped, will be effected, in the present case as in others where I have tried

it, by the puncture cautery, and the result will, probably, be given in this Journal at another time.

CASE XI.—*Pendulous encephaloid Tumour on the Abdomen, near the Groin; Operation.*

Anne Nolan, aged 40, admitted into St. Vincent's Hospital on the 4th of August, 1847, on account of a tumour pendulous from the lower part of the right side of the abdomen, just above the groin. The tumour was oblong transversely; its circumference in the long diameter five inches, and in the short or vertical diameter three inches. The surface was irregular and bulbous, without cuticle, and bedewed with a viscid and rather foetid secretion. In colour it was that of ordinary granulations when in a depending position, a dusky red. One of the mammillary projections on its anterior surface had a deep purple hue. The tumour was suspended by a pedicle composed of integument of the natural colour and the consistence of the abdominal skin. It was thin and flattened, measuring about three-quarters of an inch where it sprang from the abdomen, and becoming much smaller as it descended to enter the tumour,



which, growing up on all sides of it, concealed it altogether. Slight traction gave a clearer view of this flattened pedicle of healthy skin, which then appeared to enter and be buried in the tumour, resembling the manner in which the vascular apparatus of the kidney enters that organ. The consistence of the tumour was remarkably equal, no one portion appearing to possess more elasticity and softness than the remainder. The whole had a fleshy or springy feel, not easily described, but conveying to the finger a sensation different from that of ordinary granulations, or of fibro-cellular productions. There was no evidence of lymphatic disease in the neighbourhood.

The woman was pale, but she describes her general health as being good, with the exception of the menstruation, which for the last four months has been irregular and scanty.

She states, that from infancy there existed a small brown stain or mole, about the size of an almond, which, for thirty-nine years, was productive of no inconvenience. About twelve months ago she began to experience an intolerable itching in the part, which induced her to rub it very frequently, and which was soon followed by perceptible enlargement. About ten months ago, and when the tumour had acquired the size of a hazel-nut, the dark-brown skin which originally covered it began to give way under the friction, and was soon lost altogether. The itching sensation now gave place to soreness, and the surface of the tumour presented a flesh colour. The volume of the growth now progressively increased, and within the last two months has appeared to grow more rapidly, until it acquired its present size.

On the 6th of August the tumour was removed. When the divided pedicle retracted in the abdomen, it left a space about an inch broad, from two points of which a smart flow of arterial blood took place, requiring the application of ligatures. The whole surface was then freely touched with nitric acid, and a poultice was applied.

The wound healed by granulations, and looked healthy in its progress. A section of the tumour was made, and the part suspended, while an accurate drawing was made, as seen in the accompanying engraving. Several globular tubera were thus divided. They occupied the central portion of the tumour principally, several of the smaller ones approaching nearer to its periphery. Their colour was white, very faintly tinged with yellow. They were of various sizes, the largest about the diameter of a split pea, the smaller ones becoming more and more minute, until they were lost in the general substance of the tumour. In consistence they were soft, but very elastic; and the latter property existed in such a remarkable degree, that, in a few minutes, the cut surface of each tuber sprang forward into an almost hemispherical shape. Pressure with the finger easily reduced the little section again to a flattened shape, but it soon afterwards resumed its mammillated form, appearing not unlike the cut surface of a testis. Lateral pressure expressed from these surfaces a fluid of creamy consistence. Anxious to submit the specimen to the test of the microscope, I requested my friend, Dr. Butcher, who has given much attention to this subject, to examine it carefully. The following is his report :

“ The specimen which you gave me for examination yesterday I immediately submitted to the test of the microscope, and the result of a long and careful examination leaves no doubt in my mind as to its encephaloid character. The entire substance of it was made up of cancer cells, and their product caudate corpuscles, with contained nuclei : a more perfect specimen of this arrangement I have never witnessed. I could not, by any treatment of the tumour, produce any other than the one appearance of the structure—the irregular arrangement of the cells, and spindle-shaped corpuscles. The separation or tearing of the tumour, in any direction, would not give a fibrous arrangement, as stated to exist sometimes by Valentin.”

CASE XII.—*Large pendulous Tumour from the Labium Pudendi; Anasarca and Ulceration of the Fundus; Operation.*

A woman aged 30 was admitted into St. Vincent's Hospital 23rd January, 1844. She was married, and had three children. Her appearance was that of delicate health, but she had not lost flesh.

A large pyriform tumour hung from the left labium pudendi. The pedicle was five inches in length, and allowed the tumour to reach to the lower third of the thigh, when the patient stood erect. The point of attachment above was at the inner surface of the labium, which, as well as the inside of both thighs, was marked by large, tortuous, and prominent veins. The thickness of the pedicle was about that of the middle finger. Its integument was thickened, and of a dusky red colour, and, when pressed between the fingers, it was found to enclose a single artery, about the size of the ulnar, which pulsated strongly. The bulb of the tumour was pyriform, and measured seven inches in circumference. The skin was a dusky red colour, and at its most depending part had evidently given way, leaving an irregular ulcer about an inch long, and half an inch broad, which resembled very much the ulcers seen on a prolapsed vagina. From the surface of this ulcer there was an oozing of serous fluid, which trickled down the neighbouring parts. The tumour was soft, and yielding to the touch, and retained the impression of the fingers.



The account given by this patient was, that seven months before admission she perceived a small lump growing from the part, and that the stalk became longer every week since, as the tumour increased in size. From its inconvenient situation it interfered greatly with her movements, and was frequently subjected to injury and consequent inflammation, which latter occurrence was always followed by a remarkable increase

in its size. About two months ago, the skin at the bottom of the swelling gave way, and a copious discharge of watery fluid took place. This was immediately followed by a sensible diminution in its bulk, and she hoped it was about to disappear. The discharge ceased after a few days, and then the volume of the tumour increased again. This alternation of diminution and increase of the swelling took place several times since that period. She at length resolved to seek advice for an inconvenience which, for many reasons, was becoming intolerable; and the removal of the mass was advised.

On the 26th January the tumour was removed. In order to avoid any unnecessary loss of skin at the labium, the tumour was poised on the hand of an assistant, so as to take off the tension of its pedicle. The latter was then seized between the fingers, near its origin, and held firmly, to prevent the artery retracting too suddenly into the loose cellular tissue. The cervix was then divided by a single stroke of a strong scalpel.

The artery was next included in a ligature, and the surface of the wound touched with solid nitrate of silver. All smarting of the incision soon ceased, and the patient was left to rest, the bed-clothes being prevented by a hoop from touching the parts. The healing took place favourably, and no trace of the tumour remained.

On examining the tumour, which was exhibited to the Pathological Society, the pedicle was found to consist of thickened cellular tissue and skin, enclosing an artery and vein, the branches of which became invisible immediately on entering the bulbous portion. The section of the bulb was very moist, and exuded a serous fluid copiously. When pressure was made this oozing was increased greatly, and the bulk of the tumour considerably diminished. It was evident that the principal volume of the tumour was owing to anasarcaous infiltration into cellular tissue a little condensed. The section resembled very much the appearance of an anasarcaous scrotum or lower extremity, when examined in the same way. It had, perhaps, a still

closer analogy with the simple polypus of the neck of the uterus, diminishing in volume when the serous fluid is expressed.

The rapid development of this tumour is remarkable, since the fact of a speedy development is generally supposed to be, and really is occasionally, a ground for suspecting the existence of malignant disease. The peculiar sensation conveyed to the touch on examination, the smooth and uniform surface, the pyriform shape, and the evidences afforded by the periodical exudations of serosity, all led to the opinion that it was what is called *analogous*, or non-malignant, in its nature. In this, as in some former instances, a part remarkable for its glandular structure gave rise to a tumour of larger dimensions than those produced by integument in other situations.

In the present case a temporary ligature would have been insufficient, and a permanent ligature, including the integument and contents of the pedicle, might have been followed by erysipelas, or some other irritative reaction. The plan I adopted, then, was that employed in the management of the cord while removing the testis. The pedicle was held by an assistant, and the section being accomplished, the artery was tied in the usual manner.

HISTORY.

Pendulous tumours are apparently more frequent in female patients than in males. They may be congenital, or they may be formed at any subsequent period of life. Of the former class, some remain stationary, or grow so little after birth, that their growth can scarcely be said to keep pace with the development of normal parts. They are found, at a mature or advanced period of life, to be in size nearly as they were observed at the time of birth. They have lost, perhaps, the plumpness belonging to the skin of infancy, and their colour, changed by age with that of the surrounding skin, is a little deepened or dusky at the bulb from venous congestion. I was consulted in May last by a lady seventy-nine years old,

who shewed me a small pendulous tumour on the side of the chest, just below the breast. It was about the bulk of a very small pea; it was suspended by a delicate pedicle, which consisted merely of a duplicature of skin. The bulb of the tumour presented a slight purplish blush. This tumour, she was always told, was observed at birth, and had not altered in size from that time.

Others, after remaining stationary for an indefinite period, enlarge, inflame, and become the seat of morbid action, or the nidus of morbid deposit. The earliest change of this nature is often traced to some accidental friction or laceration, to which, from their pendulous form, they are so much exposed.

When a pendulous tumour begins to enlarge, its hypertrophy is attended by some or all of the other phenomena described in the beginning of this memoir under the head of *morbid alterations*. Increased nutrition implies an increased supply of blood; and this, combined with the retarded venous current arising from the absence of the support which it receives in other situations, induces congestion and its consequences. The fundus of the tumour becomes dusky and discoloured; serous infiltration follows; the cellular tissue becomes unequally hypertrophied; and indurations there and in the skin are to be distinguished. Abrasion next takes place, and, as in a dropsical limb, gives exit to a watery discharge, which softens and excoriates the neighbouring skin. The whole thickness of the cutis occasionally gives way, and granulations,—flabby on account of their unsupported position,—spring from the ulcerated surface, and give the whole a fungoid appearance. While these several changes are taking place in the bulb of the tumour, the pedicle may remain of its natural colour, and only change in volume in consequence of the hypertrophy of the nourishing vessels it includes; occasionally, however, the irritation and hypertrophy may extend to the pedicle, and then its colour becomes red, and its thickness increased. This thickening and congestion may even spread for

a short distance into the surrounding integument, and give it an unhealthy aspect.

Such is the usual history of congenital pendulous tumours, which, from irritation, generally mechanical, once begin to enlarge.

In this category may be included those which, existing in a different form at birth, acquire their pendulous shape at a later period, and apparently in consequence of an increased volume, the weight of which occasions, by traction, an elongation of the skin. The pendulous nævi are generally so formed. At birth there may be a simple elevation of the skin, stained, as usual, by the colour of the blood contained in the erectile tissue. The colour varies from one shade to another of the tints observed in practice. This elevation of the skin may remain unchanged for years, and at length begin to expand; but once the impetus is given, the bulk of the swelling generally increases; and if the growth is so situated that gravitation is almost constantly operative, the pendulous form is eventually acquired. The characters of such a tumour will be found to vary according as the circulation through its vessels is free; or as consolidation of these channels and the surrounding cellular web has taken place. In the former case, the tumour, when pressed between the fingers, becomes flaccid and pale; and when the pressure is removed, the fulness and colour of the part gradually return. When a tumour of this kind is accidentally pricked, it bleeds freely, and indicates the nature of its contents.

If, on the other hand, the tumour be of long standing and considerable size, and its vessels have, in fact, become solidified, the part gives to the finger the sensation of a number of solid cords running in different directions through the mass. Neither the colour nor the volume of the growth can be materially diminished by pressure. The diagnosis of this peculiar modification of nævus will generally be assisted by the presence, in the neighbourhood, of erectile tissue in a less equivocal form,

and yielding to a careful examination all the evidences necessary to establish its real nature.

In the second class, or those which are formed after birth, we shall find the simple cellular and the adipose tumours, in either of which the malignant degenerescence may eventually take place. The early history of these cases is that of all similar formations. The cellular tumour is generally described as beginning like a "soft wart," and its enlargement is ascribed to injury or laceration from accident. Its anatomical characters have been already described. Its external appearance will be found to vary according to the locality in which it is placed; and even in the same locality, according to the organization and peculiar function of the spot from which it springs. This is well exemplified in the several cases of *pendulous tumours of the female breast* already related. There is a peculiar arrangement in some of those tumours which is deserving of notice. The surface of the growth seems to be formed by a number of vegetations growing parallel to each other, at right angles to the surface of the tumour. Each of these elevations presents, at its extremity, a cuticle thickened and hardened into a warty consistence, and with a brownish grey colour, different from that of the remainder. I do not consider this appearance to be peculiar to productions of the dermoid tissues. The mucous membrane may give origin to warty growths exactly resembling what has been now described. There is a woman at present under my care in St. Vincent's Hospital, who suffers from a polypoid growth in the left naris; the surface of the tumour is constituted by prolongations of this kind. This woman was in the hospital eight years ago, but refused to allow any interference with the tumour. It had then precisely the same surface as at present, and it did not pass beyond the opening of the naris. This remarkable limitation still obtains. It does not transgress the boundary of the anterior opening of the nose, where it has no resistance to oppose its growth; and yet it has enlarged in every other direction, overcoming every

obstacle, and expanding the ala nasi, separating the nasal bones, and even making its way into the orbit.

The adipose tumour frequently becomes pendulous when circumstanced favourably for this occurrence. When large, and of long duration, it may present any of the morbid changes already alluded to. I have seen abscesses form in a pendulous adipose tumour; and I have removed pendulous fatty tumours of long standing, in which a familiarity with morbid structures enables me to say I found distinct nodules of malignant deposit.

We have thus seen, that, whether congenital or otherwise, some pendulous tumours become malignant; while others, and I believe the majority of them, remain exempt from heterologous deposit to a late period of life.

I believe, however, that a pendulous tumour is rarely the seat of encephaloid or cancer at the period of its first formation. This is my present impression, and if future experience confirm the opinion, it will follow: first, that all pendulous tumours should be removed at the earliest period at our disposal; and, secondly, that we can then do so with the fairest prospect of a permanent cure.

The grounds for my opinion, that pendulous tumours are never malignant at the period of their origin, are, first, that I have removed tumours of this kind, containing tubera of encephaloid, and which were suspended by a pedicle of thin healthy integument; and secondly, that, when encephaloid is deposited in or under the integument, its further development or reproduction is always in a lateral direction, where it has most support, and it, therefore, does not become pendulous. If encephaloid accumulated in the forward, rather than in the lateral direction, the cuticle must soon give way and expose the fungus. The tumour would thus be prevented from remaining undetected sufficiently long for the formation of a stalk or pedicle, by the traction occasioned by its weight.

Before concluding the subject of malignancy in tumours, I

may be permitted to say a few words on the disputed question of the value of microscopic researches in pathology. Some pathologists declare that the microscope is a fallacious guide, while others place an unlimited reliance on its aid. I am sure that great experience in such researches is necessary, to render any individual a competent and credible witness in the matter. But the chief objection to microscopic anatomy has been founded on the liability to error, arising from the use of instruments of inadequate or excessive power, and to the probably unequal susceptibility of the visual organs of those engaged in such researches. I believe that, so long as those investigations are conducted by individuals, the objection will continue to be made, and, perhaps, to exist.

The practice of making chemical experiments by two professors of the art conjointly, has been found to work well, and to lead to results of the most satisfactory and conclusive nature. My impression is, that the microscopic examination of morbid parts should be conducted on the same principle. If, for instance, two inquirers, already familiar with morbid appearances, examine successively the same specimen; if the first, having attentively surveyed the appearance, makes a careful sketch of their arrangement; if the second observer then repeats this process independently, and without having seen the first sketch; if, on comparing their sketches, the forms and arrangement of the parts differ, or something appears in one which is not found in the other; then let the specimen undergo fresh examination, until both are agreed that nothing has escaped remark. When this is the case, or when, on comparing their sketches in the first instance, the appearances are found to be identical, surely they may be registered as "an observation." The next step will be, to select that form of expression which, for its clearness and simplicity, seems best fitted to convey to the minds of others the impressions already made upon their own. Observations such as these,—facts, patiently observed, and methodically recorded, by two minds directing their united

powers to the one object,—will be received with confidence by the profession, and tend to settle the claims of the microscope as an agent in pathological inquiries.

TREATMENT.

It has been shewn that some of those tumours, after remaining stationary for years, become the seat of morbid action or morbid deposit. It is obvious, from this fact, that the best rule of practice is, to remove them when first presented to our notice, unless some clear contra-indication be present at the time. The treatment, then, of pendulous tumours, resolves itself into a description of the modes of operation required in particular cases. The morbid alterations to which those tumours are liable may, it is true, require a medication calculated to remove the irritation incidental to these changes. Such proceedings, however, are not to be regarded as remedies for the disease, but as measures preparatory to its complete removal by operation.

In its simplest form, the pendulous tumour seems to require merely the division of its pedicle by a knife-edged scissors or scalpel; but the point at which this division is to be effected requires consideration. If the section be made too near the bulb, an unsightly projection will remain after the operation; if it be done too near the other extremity of the pedicle, the integument, on retracting, will leave a wound, and consequently a scar, much larger than could have been anticipated. Allowance, then, must be made for the elongation of the pedicle by the weight of the bulb, and for the contraction of the stalk, which always follows its division,—the same process which renders it unnecessary to tie the neck of an uterine polypus close to the mucous surface from which it has grown. The best mode of proceeding is, to poise the tumour on the hand, and allow the surrounding skin to retract and recover its pristine position, and then to make the section of the pedicle a little below its origin. Should the nutritious artery be large

enough to deserve attention, the jet of blood may be prevented by previously including the neck of the tumour in a provisional ligature, and, when the section is accomplished, tying the divided artery. The provisional ligature may then be removed altogether. A slight touch of the nitrate of silver, just sufficient to produce a delicate white coating, will not only shorten the duration of the subsequent smarting, but lessen the probability of any reaction, especially of an unhealthy kind. It has appeared to me, that whatever seals up the cellular tissue, or the orifices of divided vessels of every denomination, diminishes the tendency to diffuse or troublesome inflammation. Simple water dressing will then complete the local treatment.

In operating on the adipose pendulous tumour, the extent of interference with the pedicle will be regulated by the presence or absence of fatty matter in its substance. If the growth extend through the neck into the subcutaneous cellular membrane beyond it, such an incision must be made as will allow of its complete extraction. In such a case, the small cavity then left should be filled with lint dipped in olive oil, and the integument brought gently over it, to prevent an unnecessarily large cicatrix. The lint is withdrawn when suppuration is established, and the integuments brought together by adhesive plaster.

The proceeding in the case of pendulous nævus is somewhat different, and must be adapted to the peculiar circumstances of the case. It is not usual for the pedicle, in such instances, to be entirely free from all traces of erectile tissue. Should the pedicle be implicated, or should the vessels of the cellular or dermoid tissues beyond it be hypertrophied, a simple section would be inadequate to the cure; hæmorrhage of a troublesome nature would be the immediate result, and reproduction of the disease the more remote consequence of such an imperfect procedure. The diseased part must be included in an elliptical incision, and thus freely and completely removed. In the case of pendulous nævus of the shoulder, already related,

the disposition to vascular hypertrophy was so strong, that, although the tumour was removed with an ellipsis of the surrounding skin, the cicatrix became afterwards enlarged and vascular, assuming the form of keloid tumour. It may happen that the erectile formation may extend irregularly, for a considerable distance, beyond the origin of the pedicle. In such cases, the amputation of the pedicle alone would entail the consequences already alluded to, while the excision of the whole of the morbid structure might be forbidden by its extent, or by the importance of the parts in which it is found. The following is the mode I would recommend under such circumstances, and when the removal of the pendulous tumour is desired on account of the inconvenience it occasions. The tumour being held horizontally and on the stretch, the point of the style or nail cautery, described by Dr. Wilmot, should be passed through the cervix in several places, so as to ensure the obliteration of the vessels contained in that place. The whole cervix may be traversed by these punctures at one or several successive operations, according to its breadth. When the vascular character of the cervix is thus changed, its section may be performed, without risk of hæmorrhage. A series of seton threads would accomplish this object, but in a manner much more tedious and painful to the patient. The mode of obliteration of erectile tissue employed by Dr. Wilmot is, I know, a great improvement on the previous practice in such cases. Its adaptation to pendulous tumours previous to their section, will, I trust, be found available, and I would venture to recommend it.

When a pendulous tumour is known, or suspected to be malignant, great care must be taken to remove the entire of the morbid parts. If, as in the case described, the heterologous structure be confined to the bulb of the tumour, and the pedicle or surrounding skin be healthy, there can be no reason for doing more than simple section of the former; but the section should not, for obvious reasons, be made too near

the bulb. But should the neck of the tumour be thickened, hardened, or irregular, a free elliptical incision should be made in the integument beyond it, and all suspicious parts satisfactorily removed.

It would have been easy to add to the number of cases, by relating those furnished by my notes of private practice. I preferred, however, the publication of hospital records exclusively, because of their undeniable authenticity, and because it was always practicable to procure a correct drawing of the parts. I have thus thrown together only a few of the results of my experience,—the anatomical characters, morbid alterations, history, and treatment of pendulous tumours,—a class of affections which have not, as far as I know, been separately considered. And I should not, perhaps, have thought of recording these observations, if I did not remember the disappointment I experienced, on consulting systematic works, at a time when these diseases were new to me in practice.

ART. X.—*Observations on Pleuritis and Empyema in Children, with Cases.* By FRANCIS BATTERSBY, M. B., Surgeon to the Dublin Institution for Diseases of Children, Pitt-street.

[Communicated to the Obstetrical Society.]

NOTWITHSTANDING the great attention paid of late years to the diseases of children, so little is known generally on the subject of pleuritis as it affects them, that in one of our standard works it is disposed of by the statement, that “there does not seem to be much tendency to pleuritis in the young subject.”(a)

With this opinion I cannot coincide. As it is, however, one very commonly entertained in this country, I shall consider it necessary to add to the detail of some very interesting cases the results of investigations made by different continen-

(a) Maunsell and Evanson on Diseases of Children.

tal writers, who have clearly demonstrated that pleuritis is very common in young children.

The frequency of pleuritis, compared to that of other diseases of children, is not easily ascertained. Of 4012(*a*) patients treated in the year 1846 at the London Royal Infirmary for Children, only three were noted as affected with pleuritis; while of 4158(*b*) admitted in 1845 to the Royal Institution for Diseases of Children, in the district of Wieden, Vienna, seventy-six were cases of that disease.

In London, during the years 1843, 1844, the deaths from pleurisy in children under fifteen years of age amounted to one-sixth of the whole number of deaths at all ages from the same cause(*c*); and of twenty-five(*d*) deaths at all ages from pleurisy, registered in the month of January, 1847, eleven occurred under the age of fifteen years. Facts like these attach to the pleuritis of children a degree of importance very little inferior to that connected with the same disease in adult life.

That even the foetus *in utero* may be affected with pleuritis would appear from certain cases adduced by Mauriceau, Véron, Cruveilhier(*e*), and Billard(*f*). The infant referred to by Billard having died on the fourth day after birth, presented the costal and pulmonary pleuræ of an obscure red colour, and punctuated. The pleural membrane was thickened, and there existed between it and the lungs cellular adhesions, as closely organized as they are found to be in adults several years after pleurisy. The pleura was also covered with a number of small granulations, and there were adhesions much more recent

(*a*) Report for the Year 1846 of the Royal Infirmary for Diseases of Children, London.

(*b*) *Jahresbericht über die Leistungen des Unentgeltlichen Kinder-Krankensinstituts im Polzeibezirke Wieden*. Vienna. 1846.

(*c*) Sixth annual Report of the Registrar-General.

(*d*) Weekly Tables of Births, &c., registered in London during January, 1847.

(*e*) *Dict. de Méd. et de Chir.* Art. *Pleurisie*.

(*f*) *Traité des Enfants nouveau nés*, p. 545.

than the preceding, for they were still of an albuminous consistence.

According to Billard and M. Ch. Baron(*a*) pleurisy is not unfrequent in infants soon after birth. From the summaries made by the latter of the cases on which his valuable memoir is based, it would seem that pleurisy begins oftener during the first five days after birth, than between the fifth day and first month ; that it diminishes in frequency from the first month to the second year; that from the second to the third year it is, on the contrary, more frequent than from the third to the fourth, and especially from the fourth to the fifth year, and that it thence becomes more rare from year to year, more particularly between the thirteenth and fourteenth, up to the fifteenth year(*b*).

M. Baron's resarches yet make it probable, that in children below the age of two years the liability to pleurisy is much less than in those more advanced in age, for, of 3392 autopsies of children from one to two years old, indubitable pleurisy was found only in 205, or six per cent.; while in 181 autopsies of children from two to fifteen years old, the pleuræ of 158, or eighty-seven per cent., presented signs of inflammation. The pleuræ, however, says M. Baron, in some of the cases comprised in the latter class, may have been affected previously to the second year, which will diminish in some degree the comparatively greater frequency, as above exhibited, of pleuritis in the second period.

With regard to the frequency of simple pleuritis in children there are great diversities of opinion. Many writers, like Underwood, think that "pleuritis rarely, if ever, exists uncomplicated with pneumonia."*(c)* M. Hache found the pleura inflamed in eighty-one out of 194 autopsies, and in not one of these cases was the pleuritis simple. Mr. Crisp(*d*), in forty-one

(*a*) *De la Pleurisie dans l'Enfance.* (*b*) *Ib.* p. 53.

(*c*) Underwood on Diseases of Children, 10th ed. p. 426.

(*d*) London Med. Gaz. Dec. 25th, 1846.

autopsies of children under two years old, discovered pleuritis in six; in one it was simple, in five combined with pneumonia; a combination which, according to Valleix, occurs in one-eighth of the cases of pneumonia in children under two and a half months old, and in one-sixth of those under eight months. This writer considers simple pleurisy to be very rare in young children, and Rilliet and Barthez, although admitting that it exists at all ages, state that they found it in an immense majority of cases after the sixth year(*a*); while Barrier, in all his experience, never observed a case of pleuritis independent of pneumonia before that year, and very few between the sixth and tenth, but from the tenth to the fifteenth year it appeared to him to be nearly as common as in adults(*b*).

M. Baron, on the other hand, states(*c*) that coincident pulmonary complications existed in only two-thirds of the cases of pleuritis which occurred in children from one day to one month old; in four-fifths of the cases from one month to one year; and in eight-ninths of those aged from one to fifteen years; whence it would follow, that simple pleurisy is the more rarely met with the nearer the period of puberty. This conclusion of M. Baron's, though opposed to the statements before quoted, is in some degree supported by the opinion of Billard and Berton(*d*), that pleurisy without any pulmonary complication is much more common in very young children than is generally believed.

I am not disposed to agree with M. Baron, that simple pleurisy is so very common in infancy, nor yet with M. Barrier that it is rare before the sixth year; Dr. Stewart(*e*), who fixes the age of three years as that at which "pleurisy becomes as

(*a*) *Traité des Maladies des Enfants*, t. i. p. 165.

(*b*) *Ib.* t. i. p. 243.

(*c*) *Loc. cit.* p. 59.

(*d*) *Traité des Maladies des Enfants*, p. 335.

(*e*) *Practical Treatise on the Diseases of Children*. By James Stewart, M. D., New York. 1844.

common as in adults," being, in my opinion, nearer the truth, as will appear from the cases I am about to detail.

Of all the products of pleuritic inflammation in children, the most common, sometimes the sole inflammatory lesion, is false membrane; a turbid serosity comes next in order of frequency; while pus is the rarest of all.

As to the seat of pleurisy, in every case with notable effusion observed by Barrier it was unilateral, except in one case of dropsy after scarlatina. In twelve other cases the effusion existed in one pleura alone, being found seven times on the right and five times on the left side; and of the cases in which the unilateral pleurisy was perfectly simple the effusion was five times on the right and once only on the left side; while in the six cases complicated with pneumonia, the effusion was found four times in the left and twice in the right pleura.

These facts of M. Barrier's square with the conclusions of MM. Rilliet and Barthez, viz.: 1. That pleurisy without any pulmonary complication is much more frequently unilateral than double, and (what is also M. Baron's opinion) somewhat more common on the right side than on the left. 2. That when pleurisy is complicated with pneumonia, it is also more generally unilateral than double, but it is then more frequent on the left side than on the right. These conclusions are not confirmed by my experience. Single pleurisy, indeed, seems much more common than double pleurisy; but in all the well-marked cases, to be detailed hereafter, the effusion, whether combined with pneumonia or not, existed on the left side, which inclines me to agree rather with Dr. Copland, that, "pleurisy in every form, in children as well as in adults, is more frequent in the left than in the right side of the chest."

Barrier, Rilliet and Barthez, and Baron, agree in stating, that the quantity of pleuritic effusion is in general very inconsiderable, and on this account, says Baron, "displacement of the heart must be very rare." In not one of the many hundreds of cases seen by him was it observed, and neither had the

others, in all their experience, an opportunity for witnessing it. The following cases, therefore, of empyema must be considered as very remarkable, especially the first one, on account of the tender age of the patient, the great amount of effusion and of displacement of the heart, and also for its mode of termination in what is called "empyema of necessity," a termination not very rare in adults, but which is also not very common, as may be gathered from the fact, that Laennec never observed it more than once at any age.

CASE I.—*Empyema of the Left Side; great Displacement of the Heart; spontaneous Perforation of the Thoracic Wall; Death.*

George Duffy, aged two years and a half, became a patient of mine at the Institution for Diseases of Children, September 11th, 1845. His mother stated that he had been a very fine and healthy child previously to his illness, then of three weeks' standing, and which she attributed to his having fallen on his side, when in play, over a piece of broken crockery-ware. She never observed any appearance of bruise or injury in consequence, but he passed a restless night, and lying on his left, or supposed injured side, he moaned much, as if in pain. The next day he was peevish and disinclined to leave the bed; and this indisposition, along with a slight cough, still continuing, she at length sought advice, not knowing, as she said, what ailed him. I found him in the following condition:

There was increased heat of skin, and some fever; respiration hurried and oppressed; he had an occasional short, dry cough, which had not altered in character from its commencement; he was indolent and disinclined to move about; the expression of his countenance was perfectly tranquil.

The chest being uncovered, the left side was visibly and greatly enlarged, and remained perfectly unmoved during the respiratory effort; and the entire of this side, which was an

inch and a half in circumference larger than the right, presented a remarkable roundness and smoothness, owing to the wide separation and protrusion of the intercostal spaces, as was readily verified by manual examination.

Every part of this side yielded, on percussion, a completely dull, dead sound, and on the application of the stethoscope nothing whatever could be heard in any part of it, except what appeared to be a distant vesicular murmur close to the spine.

The right side of the chest was extremely resonant on percussion, its movements were greatly exaggerated, and the respiratory sounds intensely puerile.

The heart was displaced so as to present behind the sternum; its action was rapid, but its sounds were normal. His usual position in bed was either on his back or left side.

After a fortnight's attendance at the Institution his mother considered him so much improved that she absented herself for a month, at the end of which (24th October) I again saw him in consequence of a tumour which, according to her statement, had made its appearance, four days previously, on the left side of his chest. This tumour corresponded to the intercostal space between the fifth and sixth ribs, being situated somewhat above and behind the usual position of the apex of the heart; in circumference about the size of a half-crown piece; it was slightly inflamed, and very sensitive to the touch, and its centre was prominent. It was quite soft, even at its base, which was not well defined; fluctuation was not distinctly perceptible, but the skin over it became tense when the patient cried. The soreness of this tumour now obliged him to lie on his back or right side.

The enlargement of the left side of the chest was still more marked than before, and the amount of the dislocation of the heart was so much greater that it now beat below, and to the right side of the right mamma, the entire of the chest on the left side, from that point round to the spine, being perfectly dull on percussion; and no sound, normal or abnormal, was

discoverable by the stethoscope, except that in the spinal region before mentioned.

The child seemed withal scarcely to suffer; his countenance was calm, cough very slight, but he remained indolent and heavy. His complexion was sallow, and he perspired at night.

On the 2nd of November the integuments over the thoracic tumour gave way, and there escaped much thin, brownish-coloured fluid, which the friends compared to unboiled flummery. The tumour then subsided entirely, its position being marked by two very small openings, surrounded by a broad, livid redness of the skin, which was widely detached around them, and which concealed the opening through the intercostals.

Having again seen him at the end of a fortnight, I found he was in the habit of perspiring at night about the head, and that he had become much wasted by hectic and diarrhœa; but that he had no longer any tumefaction of the eye-lids and feet, which existed before the empyema opened. The discharge from the chest was not in large quantity, unless when increased by the effort of coughing or of crying.

The heart was now beating at the left side of the right mamma, and the stethoscope indicated no other change. The left side of the chest seemed to be contracting.

On the 1st of December the compressed lung was regaining its natural condition. The sound on percussion in the subclavicular and upper portion of the interscapular region was less dull than before; in other words there was some sonority where before there was none whatever. In the latter place there was a sort of hoarse respiratory sound, while under the clavicle a loud bronchial respiration was audible. The heart had retrograded so far as to be now behind the sternum, and its sounds were very perceptible at the left mamma, where before they could not be detected. The left side of the chest was now smaller by measurement than the right, and it was visibly flattened in front beneath the clavicle. He seemed altogether

in a much more favourable state. The diarrhœa had ceased; he had but little dyspnœa; the discharge from the side was good thick pus; and, although he was still in the habit of sweating about the head at night, and the eye-lids were puffed in the morning, he had apparently gained in strength, was able to run about, and to use, as the friends said, “whatever was going.”

I regretted very much that I was not permitted again to see this child, although, assisted by my friend and colleague, Dr. McClelland, who had accompanied me in my former visits, I made every exertion for the purpose.

Duffy, I learned afterwards, lived till the month of April, 1846.

In the next case the termination was more fortunate; and it is an example of the natural cure of empyema by vicarious secretion from the lungs, a mode of termination first noticed by the late Dr. Greene, and subsequently illustrated by Dr. Robert Mac Donnell, but which, notwithstanding the publications(*a*) of these gentlemen on the subject, I am surprised to find has been totally unnoticed by Dr. Copland in the elaborate article on pleuritis, very recently published in his Dictionary.

CASE II.—*Empyema of left Side; Displacement of the Heart; great Contraction of the Side; Recovery.*

Christie Dempsey, a remarkably fine-looking boy, aged three years and one month, complained one evening at the close of the month of July, 1846, of pain in the left hypochondriac region. This pain, for which no cause could be assigned, was followed by fever, raving, great thirst, and complete loss of appetite. Thus affected, he remained for the next month in bed, in which his constant position was on his right side; he frequently moaned piteously, complaining of pain and soreness of the left side of the chest, upon which he often used to lay his

(*a*) See Dublin Med. Jour. vol. xvii., p. 68, and vol. xxvi. p. 448.

hand when asked where he was suffering; and the only method he would allow his mother to adopt for lifting him out of bed, was to place one hand under the nates, while she kept the other on his abdomen, as he could bear no pressure on the chest.

He was also affected with an occasional short, dry cough, and quick and oppressed breathing, which, at times, was distressing. His mother stated, that after he was a fortnight in bed, an ephemeral eruption of red blotches, the size of the top of her thimble, appeared over his body and limbs, and that shortly afterwards his scrotum and legs became tumefied, and so remained for a week. The soreness of the chest, short breathing, and decubitus on the right side, disappeared shortly before she applied to the Institution, in the beginning of the month of October.

The only treatment he had been subjected to, up to that time, consisted of a blister to the sternum, which was applied at the very commencement of his illness.

When brought to Pitt-street, the left shoulder was depressed. The left side of the chest was visibly contracted, and, by measurement, was less than the right side by an inch and a quarter. The left side was also flattened in front at its upper part; laterally the ribs felt in apposition, and they remained almost unmoved during respiration.

Percussion yielded a completely dull sound over the entire left side, and, on auscultation, nothing could be heard but tubular respiration, and sonorous rales in the superior portion of the chest, posteriorly and anteriorly, with bronchophony in the interscapular space.

On the right side the respiratory murmur, mixed with sonorous rales, was extremely peurile.

The heart's sounds were most distinctly heard under the sternum, and but feebly in the præcordial region.

Before his illness he had been in appearance a remarkably fine child, enjoying uninterrupted good health, but was now emaciated and wretched-looking. His skin was flaccid, and of

a dirty pallid colour, with a tinge of jaundice, which had been present from an early stage of his illness. He usually perspired at night about the head, and over the left side of the chest; his bowels were confined; appetite tolerably good. During the day he coughed seldom, but much on lying down at night. During the night he was in the habit of expectorating about a teacupful of thick, yellow, inodorous sputa; his breath was remarkably offensive, smelling like garlic. His mother considering the nature of his cough peculiar, compared it to that of an old man; this peculiarity, probably, depending on the quantity and looseness of the secretion accumulated in the bronchial tubes.

My colleague, Dr. M'Clelland (who kindly transferred Dempsey to my care), and I, had no hesitation in at once pronouncing this case to be of the same description as Duffy's, which was still fresh in our memory. The treatment we adopted consisted in repeatedly painting the side with tincture of iodine, and administering the syrup of ioduret of iron internally.

In the course of a month Dempsey's health was improved; he had regained some of his vivacity, and had become playful. He could lie on either side indifferently, and he looked better, although his complexion was still sallow and yellowish, and the entire of the left side of the chest remained as dull as before. Large mucous rales alone were audible, without the least degree of vesicular respiration. The night cough and expectoration were diminished. The application of the tincture of iodine irritated him so much, that I now directed frictions with the compound camphor liniment every evening.

On the 14th of December a most remarkable change had taken place; an extensive soft crepitus, like the *crepitus redux* of pneumonia, being very distinctly audible over the entire left side, which now was not more than a quarter of an inch smaller than the right. The ribs no longer felt as if in apposition, and there was considerable resonance on percussion over

the upper half of the side. The shoulder was not so low. His looks were greatly improved; his countenance was more animated; he had gained in strength and flesh. The voice was still resonant behind the scapula.

On the 29th the muco-crepitus was still general over the lung; the extent of clearness on percussion was increased; and the natural respiratory sound was audible in the upper portion of the lung.

2nd January, 1847. The dulness of the lower part of the chest was more limited. Large bronchial rales were now more audible than the previous muco-crepitus. The flattening of the side in front was less remarkable, and there seemed little difference in the height of the shoulders. The heart had nearly returned to its natural position. He still perspired at night, and the sputa, though lessened in quantity, were rather abundant and thick.

On the 5th all bronchial respiration had disappeared; distant sonorous rales were audible, and at the central and lateral part of the left side a sort of crepitus resembling the noise produced by thick parchment when crumpled. This sound seemed quite close to the stethoscope, it occasionally accompanied both inspiration and expiration, and was rendered more distinct by his coughing.

On the 12th this sound was not present, only occasional mucous rales could be detected, which, on the 19th, were again replaced by the dry, parchment-like sound, less marked, however, and only disseminated, as it were, over the central and inferior portions of the side. Both sides were now equal by measurement; percussion detected scarcely any difference in them, and the respiratory murmur, with the exception of some harshness on the left, was equally pure on both sides. The heart had quite returned to its place; he coughed very little; the sputa were very scanty; and he had now become fat and merry.

This child, though he has since had the measles, now enjoys excellent health, and has grown large and stout.

That this was a case of simple pleuritis ending in empyema, which finally disappeared by vicarious secretion, no one, I apprehend, can entertain a serious doubt. The history of its early stage, the subsequent contraction of the side, with displacement of the heart; and the return of the lung in the manner detailed, and of the side, to their natural condition, allow of no other explanation.

Nor should any one imagine that the fine mucous crepitus observed on the return of resonance on percussion, and of partial respiratory murmur, indicated the softening of an hepatised lung. That crepitus, as well as the dry parchment sounds which replaced it, have been lately added to pleuritic *frottement*, as signs indicating the absorption of pleuritic effusions, by MM. Damoiseau(*a*), and Gendrin(*b*), and Dr. R. Mac Donnell(*c*). Damoiseau and Mac Donnell describe the crepitus heard in such cases, as sharp, dry, and exactly resembling that of pneumonia, while M. Gendrin says it is of a humid nature. This discrepancy may be reconciled by the fact of the crepitus assuming different characters, according to the stage of the absorption. Thus, in Dempsey's case, it was moist at first and afterwards dry, yet certainly not of the fine description observed in pneumonia. As to the exact nature of this crepitation, Damoiseau considers it a modification of the pleural friction sound; and M. Gendrin conceives it to be caused by the penetration of air into the portion of the lungs which had been compressed during the existence of the effusion,—a mode of explanation adopted by Dr. Mac Donnell, with this addition, that the latter supposes the cells infiltrated with serum. He says: “If the cells were *fully expanded* and filled with serum, as in the ordinary form of œdema of the lung, the rale would present the loose, subcrepitant character; but, being *partially compressed* and infiltrated, the rale produced by the

(*a*) *Archives Générales*, Oct. 1843. (*b*) *Dub. Jour.*, vol. xxvi. p. 452.

(*c*) *Lancet*, March 8th, 1845. See also *Lancet*, Jan. 7th, March 15th, and May 3rd, 1845.

entrance of air acquires the sharp and fine tone heard in pneumonia." As before mentioned, the rales heard by me were by no means of this fine character, but rather produced the impression of their being caused by the air in the bronchial ramifications passing through a tough mucus, such as we are informed by Hasse they are loaded with while the lung is compressed.

This crepitation, whatever be its exact nature, was also present in the following case, which I had the opportunity of observing through the kindness of Dr. M'Clelland.

CASE III.—*Empyema of the left Side ; Displacement of the Heart ; Recovery.*

Ellen Martin, aged four years, a stoutly-formed, healthy-looking child, admitted, February 20th, 1847, into the hospital of the North Dublin Union workhouse, of which she was an inmate, under the care of Dr. M'Clelland.

No accurate account of the history or length of her illness could be obtained; indeed few, on a superficial examination, would be induced to think that her chest was seriously affected. Respiration was rather oppressed, and performed thirty-six times in the minute; she coughed scarcely at all, and had very little expectoration, but seemed much debilitated; the temperature of the skin was low, the extremities cold, and the pulse at the wrist could with difficulty be felt; her face was pallid, but its expression perfectly tranquil; in bed she lay on the left side only, and at once changed to it if placed on her right side; the tongue was red and rather dry.

The left side was more than an inch, by measurement, larger than the right, and was also completely dull on percussion, this dulness extending even to the right side of the sternum, in which position the heart's sounds, nearly inaudible in the præcordial region, were heard most distinctly, and it was possible actually to catch the apex of the heart between the fingers, by pressing them upwards under the cartilages of

the false ribs of the right side, a circumstance to which my attention was directed by Dr. Kirkpatrick.

Inspection of the side could not detect any remarkable dilatation except in the left pectoral region, which seemed very prominent when viewed from behind and from above downwards. During the act of respiration there was scarcely any motion perceptible in the ribs of the left side; their expansion on the right side was, on the contrary, strongly marked; on the former a diffused bronchophony and bronchial respiration alone were audible, together with sonorous rales, which also existed on the right side, where the respiration was otherwise natural, although puerile.

1st March. Pulse was improved, yet still extremely weak and thready in the right wrist, and scarcely perceptible in the left. She could not bear pressure to be made on the right side of the abdomen; cough insignificant.

On the 20th of March she was much better, and was able to lie down on either side indifferently. The fluid was so far absorbed as to have allowed the return of the heart to its natural position. There was a very considerable degree of resonance on percussion posteriorly, as far downwards as the inferior angle of the scapula; anteriorly it was less marked, while laterally the dulness had scarcely altered. The returning respiratory sound was harsh both anteriorly and posteriorly, and accompanied on inspiration and expiration by a dry parchment crepitation, or large crackling sounds. She had lost her previous cough; the fulness of the pectoral region had disappeared; and there was no difference by measurement apparent in the circumference of the two sides.

This child continued to improve rapidly, and in three weeks' time, from the date of last report, was perfectly well, and had quite recovered from a slight contraction of the side and drooping of the shoulder which succeeded the absorption of the pleuritic fluid.

During the first month after her admission into the hos-

pital it was necessary, on account of her great debility, to give her a regular allowance of wine daily. She was ordered a mucilaginous mixture containing acetate of potass, and subsequently the syrup of iodide of iron, along with frictions to the side of an ointment composed of the Ungt. hydriod. potassæ and Ungt. iodinii.

In the following case, to which, in regard to the age at which it occurred, there is nothing similar on record, the symptoms of pleurisy were still more latent than in the one just given; in fact there was not the least cough throughout, no complaint of pain in the side or anywhere else, and the child could assume any position in bed without inconvenience. The peculiar crepitus which accompanies the absorption of the fluid was not observed in this case, as the child passed from under my observation before the period for its recurrence, in consequence of the mother being obliged to join her husband in England.

CASE IV.—*Empyema of left Side; Displacement of the Heart; Recovery.*

Mary Anne Hartfort, aged two years, admitted July 2nd, 1847, under my care, at the Institution for Diseases of Children.

On questioning the mother as to the nature of her child's illness, she stated that three months previously, she had had scarlatina, followed by diarrhœa, which had reduced her in flesh very much; that she never afterwards recovered her vivacity and shewed but little desire to be out of bed; and that during the last two days only her breathing had become very short and oppressed.

Having caused the child to be undressed, I at once observed that there was an extensive effusion into the left side of the chest. This side was manifestly enlarged,—it was half an inch larger than the right; viewed from behind it seemed

convex, and smooth laterally; there was a remarkable prominence of the pectoral region, and the entire side was completely dull; the pulsations of the heart could not be detected in the præcordial region, its sounds were most distinct at the right of the sternum; on the left side nothing could be heard but tubular respiration and bronchophony; the respiration, with the exception of being puerile, was natural on the left side. There were seventy inspirations in the minute; pulse 140. She had not had the slightest cough, and was never observed to lie on one side in preference to the other, and of late her ordinary position in bed was on her back. She was much wasted; integuments flabby; complexion pallid; abdomen full; appetite impaired.

On the 7th the respiration was not so much hurried, and on the 17th the left side was scarcely larger than the right. The fulness before observed in the pectoral region was no longer remarkable. The heart's sounds were most distinctly audible between the left mamma and side of the sternum.

On the 22nd, the last time I had an opportunity of seeing this child, she was improved in appearance and in her general health. The sides of the chest were equal by measurement; the heart was beating in its natural position; the expansion of the left side was, however, still defective, but the extreme dulness had diminished under the clavicle, as well as over a part of the side superiorly. The treatment was here the same as in the case preceding.

If these cases, by their having occurred within a brief period, do not indicate a much greater tendency to pleuritis in very young children than is generally believed, they, at least, from their singularity are deserving of notice.

That they were cases of simple primitive pleurisy there can be no doubt, from their history as well as from the admitted and well-known fact, that an extensive pleuritic effusion places the lung out of the pale of inflammation (Laennec, Hasse).

They present some striking peculiarities. In Case I. we have pleuritis produced in an unusual way,—from contusion. Case II. is remarkable for the rapidity with which, after the completion of the absorption, the lung and chest returned to their natural state. Dr. Copland speaks of this contraction *diminishing sometimes*, especially in growing persons, but does not allude to its entire disappearance as even possible. This case also, compared with Case III., goes to shew that the amount of contraction corresponds with the violence of the inflammation. Cases III. and IV. afford good examples of the latent form of pleurisy common in children, more particularly Case IV., in which there was not only no semblance of pain at any time, but there was not the least cough, nor any prominent sign of chest affection: and Cases II. and IV. shew how little reliance, as a guide to diagnosis, can be placed on the decubitus assumed by children with pleuritis or pleuritic effusions, although adults so affected almost invariably lie in the former instance on the sound, in the latter on the disordered side.

In short, all the four cases demonstrate how possible it is to overlook pleuritis and its effects in children, and, consequently, the necessity there is for instituting in every case a careful physical examination, if it be desirable to avoid making gross blunders in diagnosis and treatment.

“Simple primitive pleurisy,” say MM. Rilliet and Barthez, “in children above six years of age, is generally a benign disease, and we may be almost certain to see it end in a return to health in such cases as run an acute course;” for, of twenty-one such cases treated by them, all recovered(*a*). Hache, Constant(*b*), Baudeloque(*c*), and Barrier, entertain a similar opinion. The cases I have given seem to corroborate these views, as well as these observations, that such a form of pleurisy

(*a*) *Loc. cit.* p. 166.

(*b*) *Gazette Médicale de Paris*, 1836, p. 265.

(*c*) *Lançette Française*, 1837, p. 146.

is most common in robust and healthy individuals. Primitive pleuro-pneumonia, on the other hand, is a more dangerous disease than pleurisy or simple pneumonia; for, in Rilliet and Barthez's practice, two out five of such cases proved fatal; in Barrier's, five out of six; "but the prognosis," say Rilliet and Barthez, "is still more unfavourable when the pleuritis degenerates into the chronic form; and that, accompanied with slight effusion, is much less dangerous than when the latter has produced deformity of the walls of the thorax."(a)

There are, however, on record many cases of uncomplicated empyema in children six years old and upwards, as well as in adults, which ended favourably after the occurrence of deformity of the chest, and even after the evacuation of the fluid through the thoracic walls by an opening, whether spontaneous or artificial. Of the four cases, between seven and nine years of age, in which Dr. Hughes performed the operation of paracentesis(b), all recovered; and Heyfelder(c) likewise operated with perfect success upon three children, aged from six to seven years, yet the disease in one of them was of four months and a half duration, and the fluid evacuated amounted to six pints (chopines). I think, therefore, that the fatal termination of Case, I. affords no reason for an unfavourable prognosis, even at a very early age, in simple primitive pleurisy, if proper care be taken with the patient. The empyema, in Duffy, was clearly uncomplicated; the lung, when I saw him for the last time, three months before death, was rapidly regaining its natural condition, and this accompanied with improvement in his general health; but the stupid parents cared not, as they confessed, whether the child lived or not; and, from the time the abscess appeared in the side, they would not listen to medical advice.

I certainly cannot agree with Mr. Crisp(d), that simple

(a) *Loc. cit.* p. 167. (b) Guy's Hosp. Rep. Nos. 3 and 4. 1844.

(c) *Archives Gén. de Méd.* 3e série, t. v. p. 59. (d) *Loc. cit.*

pleuritis in children is a disease of "great danger;" nor yet with Dr. Copland, that "its effects are the more to be dreaded, the younger the child which becomes the subject of it"(a). Of the seventy-six cases treated at the Institution for Diseases of Children in Vienna, but two died.

We are now in some measure capable of judging how far it is correct or not to say, that "there are no diagnostic marks which distinguish the pleuritis of children from other inflammatory affections of the chest during life"(b). No doubt pleurisy in children is frequently not only masked by cerebral and other affections, but is deficient in rational symptoms, which, however, are not so constantly attendant upon the pleuritis of adults as to prevent this being often latent in the latter also(c).

The slightest attention to the ordinary signs of pleuritic effusions could not have failed to discover the real nature of the cases I have detailed, with the enlargement of the side and displacement of the heart; but, even at an early period, while the effusion is still moderate in quantity, it is possible, according to Rilliet and Barthez, to ascertain the existence of pleuritis in children by means of the same physical signs observable in that disease in adults.

Of these signs pleuritic *frottement* and ægophony (which is at any age one of little value) are the least constant in children, although Rilliet and Barthez state that they have found the latter so early as the second, third, or fourth year. *Frottement* they never detected before the fifth year. These writers, I may add, state, that pleuritic effusion was pointed out in a child of three years of age by the absence of vibration; but this test, as Dr. Stokes very justly remarks, is inapplicable in many cases of girls and boys, previously to the change of voice, the vocal vibration in them not being sufficiently powerful to be felt by the hand(d). Before the end of childhood,

(a) Diet. Pract. Med., vol. iii. p. 283.

(b) Maunsell and Evanson, *loc. cit.*

(c) Stokes on the Chest, p. 481.

(d) On Diseases of the Chest, p. 498.

or the eighth year, it is, I think, impossible in any case to detect this vibration.

The most valuable and generally available signs, at an early stage, are, bronchial respiration, feebleness but purity of the respiratory murmur, and dulness of sound on percussion.

These writers explain the frequency of bronchial respiration, which they have oftentimes detected in children from two years upwards, by, 1, the proportionably greater narrowness of the chest than in adults; 2, the greater number of respiratory movements; and 3, the small quantity, in certain cases, of the liquid effusion, a cause exemplified in Case I., in which the bronchial respiration, at first totally absent, appeared when the great amount of the effusion was diminished.

The bronchial respiration of pleurisy differs from the true souffle of pneumonia by its metallic tone, and more particularly by its progress and duration; and it is a general rule, remark Rilliet and Barthez, that when pleuritic effusion supervenes in a child affected with hepatization of a portion of the lung, sonority of the chest totally disappears, and all the abnormal signs are heard with greater intensity; thus the souffle becomes greatly augmented in distinctness, sometimes it assumes a cavernous tone, and the voice is so resonant as literally to offend the ear.

Such an association of effusion with hepatization existed, it appears to me, in the following case.

CASE V.—*Hepatization; Plueritis; Recovery.*

Ellen Cheevers, aged three years, came under my care in July, 1845. She was affected with pertussis five weeks, and had been seized by it during convalescence from measles. Her countenance was perfectly natural, and, independently of the paroxysms of the hooping-cough, and a rapid and excited action of the heart, there was nothing, at first sight, to attract particular attention.

On examining the chest, the left side was found to be com-

pletely dull, both laterally and posteriorly, and co-extensive with this dulness there was a peculiarly clear tubular respiration and bronchophony distinctly audible. The sound of ordinary respiration was feeble, and mixed with moist rales.

After an attendance of some weeks at the Institution, the affection of the chest had greatly improved, although there remained a dulness of the side, and I lost sight of her until the 23rd of last January, when she again came under my care, in consequence of a smart febrile attack, attended with convulsive paroxysms of coughing, with palpitations. She had dyspnœa, and her face was bluish and puffy. The left side of the chest was completely dull everywhere, except under the clavicle anteriorly, and posteriorly above the spine of the scapula, yet these parts were dull compared to the same on the right side. A leathery creaking sound accompanied both inspiration and expiration on the left side, and there was very distinct bronchial respiration and bronchophony.

On the 27th the bronchial souffle had altered in tone, and was as distinct to the ear as if produced by blowing through a metallic tube, and this sound (which accompanied both expiration and inspiration), along with a clear broncho-ægophony (if I may use the word), was audible over the greater part of the side, posteriorly and laterally. Near the point of the acromion they were, strange to say, perfectly audible, but they were most distinct over the scapula.

The paroxysms of dyspnœa were sometimes so severe at night, that her mother dreaded her being suffocated. She usually lay on the left side, and complained of its being sore. The peculiar tubular respiration and resonance of the voice, as above described, after having continued a few days, were replaced by ordinary bronchophony, and what may be called laryngeal respiration, for it was precisely similar to what was heard on applying the stethoscope over the child's larynx. The continuance of this sound was not long, and about the middle of February there was a harsh respiratory sound and

common resonance of the voice, with pleuritic friction. The dulness on percussion was now much lessened. The fever had subsided, and her general health was improved.

A short time since I ascertained that there was still much dulness on percussion of the side, with a degree of bronchial respiration. Her health was tolerably good.

The peculiar and very remarkable modifications of the voice and respiration, as well as their short duration, plainly indicated the addition of pleuritic effusion to an old hepatization of the lung. The effusion, in consequence of this state of the lung, could not have been to any large amount; and the side did not at any time undergo the least alteration in its dimensions. There evidently remains still a condensation of the pulmonary tissue, yet recovery, in any shape, seemed at first very unlikely.

Of the above signs of pleuritis, feebleness of the respiratory murmur, and dulness on percussion, are alone applicable to the diagnosis of pleurisy in infants, although Dr. Copland says, that "a rubbing or creaking sound is heard on auscultation," and Mr. Crisp likewise asserts, that "the lungs can be heard moving up and down like the piston of a steam-engine." Rilliet and Barthez, as we have seen, think differently, and I must confess I have never heard what I would call pleuritic frottement in infants, unless it was present in the following case, which affords a good example of a form of pleuritis very common between birth and one year, but in which the stethoscopic signs belonged to, I think, the bronchitis alone.

CASE VI.—*Bronchitis; Pleuritis.*

Henry Batt, aged five months; admitted January 22nd, 1847; a very fine child; ill with cough since the 17th. The cough is sharp, painful, restrained, and comes on occasionally in fits, which are terminated by shrill screaming. He keeps the head drawn firmly backwards; the features are contracted, and have a painful expression; breathing quick and jerky; abdominal respiration strongly marked.

When a fit of severe coughing comes on he appears in the greatest pain ; the face becomes congested, eye-brows contracted, eyes staring and watery, limbs flexed, and hands clenched, and he shrugs and works with his shoulders as if something sharp was sticking in his back.

No decided dulness ; respiration is feebly audible, and there are rales posteriorly, giving the impression of the air in the minute bronchial ramifications passing through a viscid fluid. I directed a leech to be placed on the back of the hand, and ordered powders composed of calomel and hippo, with a cough mixture containing syrup of squills and hippo wine.

He was not again brought back until the 26th, as he had obtained almost instant relief from the leech, which had not been applied many minutes when he fell asleep. He was then animated and playful ; and the head no longer flexed backwards ; cough very slight, free, and unrestrained : the respiration pure, but feeble, as if the lungs were not filled on inspiration.

29th. The respiratory sound is now puerile and natural. He is quite well.

The peculiar symptoms here present are very common in infants, and arise, it appears to me, from pleuritis supervening on acute bronchitis, which in them is, perhaps, the sole cause of the former. The fixed position of the head backwards, lately noticed by Mr. Crisp as a symptom of pleuritis, I have been long in the habit of observing in such cases as the above, and it seems to arise from an instinctive effort to avoid painful motion of the chest, by fixing the ribs, and giving full play to the abdominal respiration. This position of the head in pleuritis may be distinguished from that attending cerebro-spinal arachnitis, or other affections of the nervous centres, by all change of posture in pleuritis being followed by great uneasiness and screaming, while in the latter the infant is not so restless, nor crying constantly, especially when moved or held erect, as in pleuritis.

When pleurisy coexists, as in the preceding case, with acute bronchitis or pneumonia, active treatment is absolutely necessary on account of these latter, but from the tendency of simple pleurisy to be in children subacute, *ab initio*, or soon to degenerate into the chronic form, depletory measures are often, even at the commencement of it, inapplicable.

Constant and Baudeloque consider recovery from simple pleurisy to be the general rule, and that irrespectively of the quantity of effusion, or whether treatment be had recourse to or not. In reference to the latter part of this opinion I can only say, that I am convinced of the utility of the treatment pursued in Cases II., III., and IV., as well as that the total neglect of due care conduced, in a great measure, to the fatal termination of Case I.

ART. XI.—*Contributions to Aural Surgery*, Part III.(a)—*Inflammatory Affections of the Membrana Tympani and Middle Ear*. By W. R. WILDE, M. R. I. A., F. R. C. S., Surgeon to St. Mark's Hospital.

NOTWITHSTANDING the remarks which we daily meet with in the periodic and "manual" literature of the day,—that the treatment of diseases of the ear is an opprobium to medicine,—the progress which this branch of medical science is mak-

(a) Part I., upon the Causes and Treatment of Otorrhœa, appeared in the former Series of this Journal, for January, 1844, vol. xxiv. p. 388. This essay has been twice translated into German,—first by Dr. Von Hasselberg, of Stralsund, in 1846, and afterwards by Dr. Schmaltz, of Dresden, during the present year. Part II., upon the early History of Aural Surgery, and the Nosological Arrangement of Diseases of the Ear, appeared in that for May, 1844, vol. xxv. p. 422.

To students and those commencing the study of aural diseases, who may be familiar with the German language, I would recommend the perusal of the work of Dr. Martell Frank, "*Practische Anleitung zur Erkenntnis und Behandlung der Ohrenkrankheiten*," &c. &c., Erlangen, 1845.

ing is in all probability as rapid as that of the other departments of the healing art.

Among the many causes from which this opinion has arisen, there are two which must pre-eminently attract the attention of any person conversant with the subject, or who will calmly examine into the question. The first is, that heretofore the treatment of those diseases has been committed to the hands of the most uneducated quacks and charlatans, male and female,—persons totally unacquainted with the first rudiments of medical knowledge ; the second, that medical men themselves,—most astute and practical physicians and surgeons in all other respects,—treat diseases of the ear certainly in a manner that savours of empiricism, by prescribing nostrums, of both a local and general character, which we know they would never think of using in similar forms of disease in other organs of the body. This latter cause evidently results from want of proper attention to the subject in our schools, and from the practice of prescribing at random for diseases, the diagnosis and pathology of which are unknown to practitioners themselves. To these causes may be added others that, to a certain degree, serve to bias the public mind against the treatment of aural diseases. In many cases, there is either an unconsciousness of the insidious approaches of deafness, or an unwillingness to admit even the possibility of such an occurrence ; or, again, there is an apathy and indifference, to a greater or less degree, on the part of those affected with deafness, to seek advice, which is scarcely credible. Persons who, if they suffer the least inconvenience in any of their functions, or the slightest disturbance of the due exercise or healthy condition of any of the other organs of sense, would immediately apply for medical relief, and submit to any, even the most severe form of treatment, will patiently permit the sense of hearing to be greatly impaired, nay, even lost on one side, without making any effort for its restoration. When the lapse of months, and even years, have contributed to confirm

and render incurable such persons, they generally respond to inquiries with regard to previous treatment,—that they did not like to be “tampering” with their ears, or, that they were told nothing could be done for them. It would in no wise conduce to the practical effect to which I hope this paper may tend, to inquire into the causes of these results; I may, however, mention, that medical men themselves have in part conduced to produce this want of faith on the part of the patient, either by direct opinion as to the incurable nature of the disease or diseases known by the symptom of deafness, or by such futile treatment as broke down the confidence of the patient in any form of treatment for diseases of the organs of hearing. It is true that cases of what are termed “nervous deafness,” that is, of defect of the hearing function of the acoustic nerve in any part of the internal ear, from paralysis or other causes,—or of those portions of the brain which preside over the functions of hearing, or give origin to, or are connected with the portio mollis of the seventh pair of nerves,—in fact, such cases as are analogous to amaurosis,—are as intractable as that disease of the eye;—yet I fear not to reiterate the assertion which I made upon a former occasion, that if the diseases of the ear were as well studied or understood by the generality of practitioners, and as early treated, as the diseases of the eye, it would be found that they were just as much within the pale of scientific treatment.

Notwithstanding that we have now several special works upon aural surgery, as well as some valuable monographs in the cyclopedias and periodicals, it is to be regretted that the modern Systems of Surgery contain but scanty information upon the subject of diseases of the ear.

The following passage from M. Druitt’s well-arranged work (which is an exception to the class), is so apposite to the foregoing observations, that I insert it: “Deafness is so common and so distressing an infirmity, and when of long standing, is so incurable, that we cannot too strongly urge all medical prac-

tioners to make themselves familiar with the treatment of diseases of the ear. They should also encourage their patients to apply to them for the relief of *slight* and *incipient* ailments in this organ, instead of allowing them to go on till they become permanently deaf, and then letting them fruitlessly seek relief from ignorant and mercenary quacks.”(a)

With these preliminary remarks I beg leave to lay before my readers some observations upon the inflammatory affections of the external membrane of the tympanum. Before, however, I enter upon the description of these diseases I feel it incumbent upon me again to offer a few observations with respect to the best method of conducting an aural examination, the only true mode of arriving at an accurate diagnosis; and I shall confine my observations as much as possible to those means which are especially requisite in the diseases about to be considered. I suppose the practitioner perfectly familiar with the normal and healthy condition and appearance of the parts, particularly the *membrana tympani*.

METHOD OF EXAMINATION.

Passing for the present the subjective symptoms, which will best appear in the words of the patient, in the course of this paper, let us inquire into the best method of forming a diagnosis from the physical signs which are present. The patient being placed opposite to a strong, direct sun-light, with the head inclined at such an angle that the sun's rays may fall directly through a tubular speculum upon the *membrana tympani*, we first carefully observe the condition of the concha, external meatus, mastoid process, infrazygomatic region, and that situated immediately below the lobe of the ear; *the auricle*, its various folds, its colour, its temperature in particular, its thickness as learned by grasping its hem or helix between the fingers, and the angle which it forms posteriorly with the cranium(b); then

(a) *Druitt's Surgeons' Vade Mecum*, p. 382.

(b) Acquired as well as congenital malformations of this portion of the au-

the position, size, shape, and colour of the *external meatus*, as seen without altering the relation of the parts(*a*). The upper rim of the helix should then be grasped between the finger and thumb of one hand, and drawn upwards, backwards, and outwards, while the thumb of the other hand placed in front of the tragus, by drawing it and the integuments forward upon the zygoma, exposes the outer third or more of the auditory canal to view. The finger should then be pressed deeply and firmly upon the moveable root of the *tragus*, and backwards into the depression between it and the articulating surface of the jaw. While the finger is retained in this position the patient should be desired to open and shut the mouth, and the amount of pain or inconvenience experienced by the pressure in those two different positions of the jaw accurately noted. The middle and fore-fingers should likewise be inserted deeply behind the ramus of the jaw towards the styloid process, and notice taken of the sensations there experienced.

The *mastoid process* in an especial manner claims our attention, where we have reason to believe inflammatory action exists. Its colour, size, shape, temperature, may be learned by even a cursory examination; but, besides this, it should be most carefully pressed upon with a couple of fingers, with a much greater degree of force and firmness than is usual in making examinations of the like nature elsewhere; and not only should this examination be applied to the mastoid region, but to the whole posterior and lateral portion of the head, if

ditory apparatus are not uncommon. Among the various methods adopted to distort this beautiful acoustic instrument, so admirably formed and adapted for collecting and transmitting sound, may be enumerated the pains effectually taken by old ladies to obliterate all the folds of the external cartilage, by tying it close to the head with a tight band, and continuing this distorting process without intermission for years together.

(*a*) Without any recent or manifest disease the external meatus may, instead of presenting an irregular ellipsoid, be converted into a mere slit by the pressure of the tragus backwards, or it may be preternaturally dilated, or we may find it affected by stricture.

we have reason to suspect any inflammation, or its effects. The insertion of the sterno-mastoid(*a*), as well as the upper third of that muscle, should also be carefully examined in the same way. If the integuments and soft parts are swollen or œdematous, as is frequently the case in certain inflammatory affections of the ear, as also where they have become thickened from long-continued disease, it will require a considerable degree of force to make a perfectly satisfactory examination. The amount of pitting made by the finger during this examination, and its degree of permanency, are also circumstances of value in the formation of a diagnosis. Percussion of the mastoid process, immediately behind the attachment of the auricle, occasionally affords some information, as will be shewn in some of the cases hereafter to be detailed.

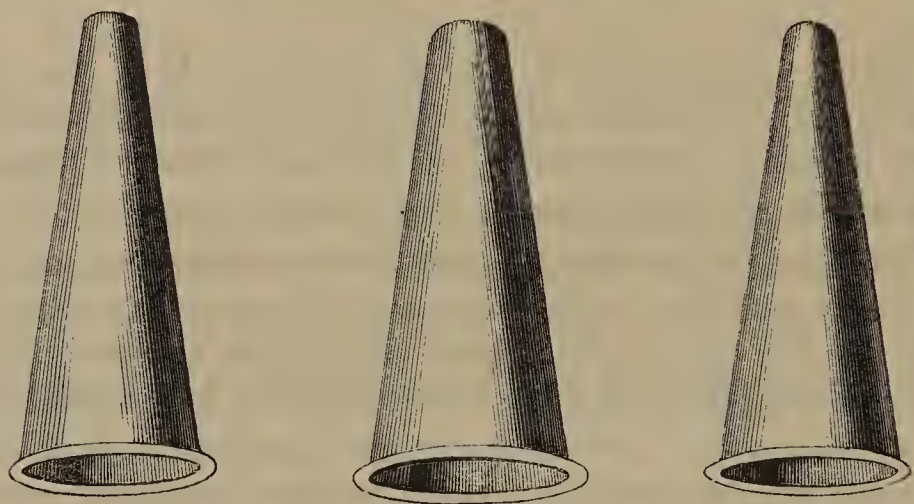
We next proceed to inquire into the condition of the *auditory canal*, and external surface of the *membrana tympani*. To effect this, and to explore every portion of the surface of these parts, it is necessary to resort to the mechanical assistance of the *speculum*(*b*), first taking care to remove any im-

(*a*) There is a small gland, in shape and size like a horse bean, situated immediately behind the auricle, over the middle of the mastoid process, which frequently becomes enlarged during the progress of aural inflammations. It is also the seat of violent neuralgic pain in some instances.

(*b*) From a long and most extensive use of the tubular speculum, which I was the first to introduce into this country (see Essay upon Otorrhœa), I am convinced that it is not only the simplest, but also the most effectual instrument for examining the condition of the membrane of the tympanum and the external auditory canal. Various instruments constructed with divaricating arms, tubes with prisms, and divers lamps, have been recently invented, and their virtues set forth in graphic terms by their inventors and supporters, but they are all comparative failures, and for the following reasons: divaricating instruments cannot enlarge the osseo-cartilaginous portion of the canal near the tympanum; the prisms are totally unnecessary, and even disadvantageous where direct light can be procured. The various lamps possess these two radical defects: the light which they transmit throws a peculiar lurid glare upon the entire of the parts which they illuminate; and although an irregularity of surface, a polypus, an aperture in the *membrana tympani*, or the like, may indeed be detected, yet shades of colour, vascula-

paction of wax, accumulated discharge, or other mechanical impediment which may exist and obstruct our vision. If this obstruction is complete, and that we have reason to suppose that it is the chief cause of deafness, the employment of a syringe and some plain warm water is the best mode of removing it; but if the obstruction merely co-exists with other, and particularly some of the inflammatory affections of the meatus or

rity produced by inflammation or congestion, slight opacities, minute points of morbid deposit, and slight ulcerated abrasions, want of polish, and loss of transparency, &c., cannot be detected by their means. Again, although we were able to detect an ulcer, a granulation, or a perforation, we are not able, while the eye is fixed upon the spot, to apply any direct remedy to the parts affected,—to pass down a porte-caustic, a forceps, a snare, or a camel-hair brush, &c., through this lamp. How, for instance, could a hair, no uncommon cause of annoyance, be removed off the surface of the drum but through one of these tubes? No obstetric practitioner thinks of examining the os uteri or the surface of the vagina with a lamp, so long as the sun's rays can be directed through a tubular speculum to the parts affected. The accompanying illustration exhibits the forms of specula which I still find to answer every useful purpose.

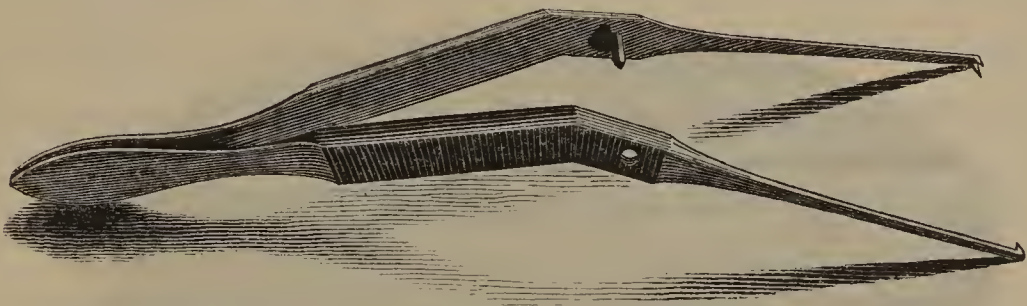


It is unnecessary to blacken the interior of the speculum, and the shorter it is made the more easy will it be found to employ instruments upon the membrane of the tympanum, or the lower portion of the passage, through it. By means of these tubes, employed, as I have directed in my former essay, with bright direct sun-light, every portion of the meatus and the membrane of the drum may be as clearly and accurately investigated as the surface of the eye. There are cases, however, in which a lamp may be employed: they are those in which it is imperatively necessary to examine the ear on a very dark day or at night. It is of great consequence that, in

tympanal membrane, or if it be only partial, and consists of portions of detached cuticle, hairs, or scales of hardened, inspissated cerumen, it is better to remove these gently with a pair of fine forceps(*a*), because the very act of syringing, even with warm water, causes in a healthy ear an increased vascularity, which will in a diseased ear mask the actual amount of disease present. The same observation applies also with respect to slight otorrhœa, but if there be much discharge present we must have recourse to the syringe. The form, curvature, colour,

making these examinations, the shadow of the operator's head should not fall within the sphere of the speculum. It should be a little above or a little below it, according to the sun's elevation at the moment.

(*a*) Having found that the handles of the instruments introduced through the tubular speculum and the fingers of the operator interfere to a certain degree with the direct sun rays, I have latterly had instruments constructed with an angle in the shaft, as shewn in the accompanying view of a pair of ear forceps,



the utility of which is at once manifest. In the same way I have improved upon the snare for removing polypi, as shewn in the accompanying cut. In making this instrument, the loops at the side and the holes at the top should be made very smooth and their edges bevilled off, so that the wire will not scrape or cut in running through them.



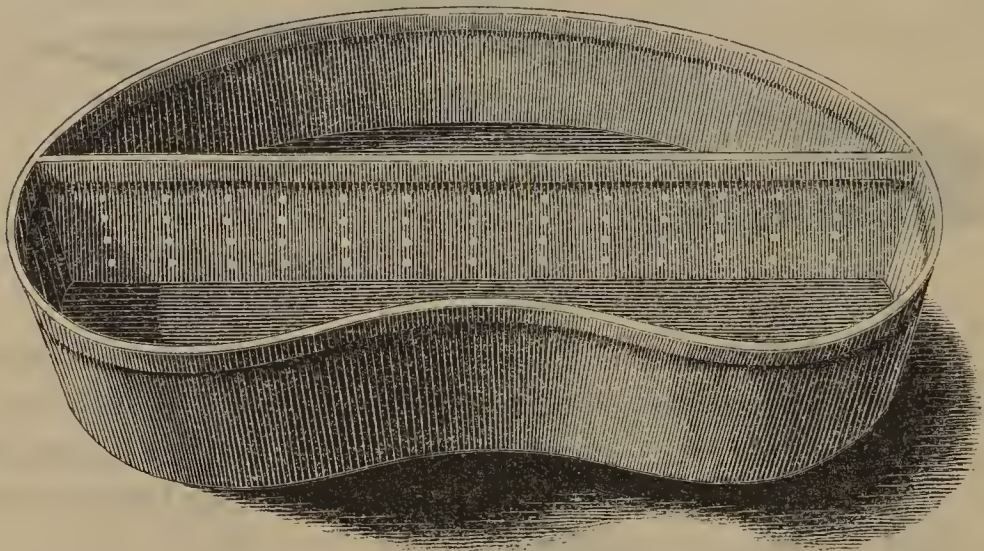
All ear instruments should be constructed upon a like principle.

For syringing the ear I have found the form of vessels represented on the other side very useful: it is six inches long, four broad, and two deep; its

polish, vascularity, and the secretion of the entire auditory canal, should be accurately observed.

Having brought the whole of the auditory canal and the entire of the *membrana tympani* under our view, we must take accurate note of their colour and relative positions. The tympanal membrane, in an especial manner, claims our attention; not only its *superficial colour*, but its degree of *transparency* or *opacity*, its *tenuity* and *thickening*, its *vasculature*, and the *arrangement and position of its vessels* in every part,—its *tension*, *flexibility*, *polish*, *curvature*, and the position both to the interior of the cavity of which it forms the outward boundary, and also to the handle of the malleus, both above and below the attachment of this bone, should be carefully observed(*a*). While the membrane is thus within the field of the speculum, the patient

concave part fits accurately the curve beneath the lobe of the ear; and the perforated septum strains the clean water from the dirty.



Simple as the operation of syringing appears, it requires some caution and dexterity in its performance.—While the patient holds up the pan, the helix of the auricle should be grasped with the left hand, so as to straighten the auditory canal, and then a proper brass syringe, with a pair of large loops attached to its upper extremity, through which the fore and middle fingers of the right hand are passed, injects a steady stream of water, by the thumb working the piston. In some persons the act of syringing, and in others the mere introduction of a speculum, induces violent paroxysms of coughing.

(*a*) The membrane of the tympanum is, as I have already stated, not

should be desired to try and press air into the drum by holding the nose, shutting the mouth, and making a forced expiration(*a*). This manœuvre should be resorted to several times, if the first be ineffectual, as some degree of tact on the part of the patient is necessary to test the experiment. While the air is thus pressed into the drum we should note accurately whether the membrane vibrates, or its tensility is altered, and if so, whether it regains its original position suddenly or gradually. The patient's own sensations should likewise be taken into account in this matter. It is also especially necessary carefully to observe the degree of vascularity produced by this inflation, as well as the course and position of the vessels which cause such vascularity(*b*), and if a small aperture exist in the membrane which may have escaped the eye, we may then readily detect it both by sight and hearing. By this means we often detect a small perforation in the membrane, which, from its minuteness, or owing to the part being thickened or coated with discharge, had previously escaped our first mere ocular inspection. If such exist, we shall then see its open everted lips sometimes pressing out mucous discharge, and also hear a peculiar whistling sound, which the air makes in passing through this narrow

what it is described in anatomical works, concave on its outer aspect, but presents in the normal condition a number of curves, the most prominent, however, of which is that presented by its inferior and anterior portion, below the attachment of the malleus, which is a *decided prominent convexity*, as may be seen, not by inspection of the dead subject or an anatomical preparation, but by examining the parts in a living, healthy ear. Any deviation from this condition is the result of disease, and attended with more or less impairment of hearing, as the alteration in the curves of the media of the eye are attended with certain peculiarities of sight, as I have already explained in my second contribution to aural surgery, p. 431. See also the Dublin Dissector, fifth edition, p. 673. The normal colour and consistence of this membranous septum is very like that of fine gold-beaters' skin.

(*a*) The sound thus produced very much resembles that of a dried bladder suddenly inflated into air.

(*b*) In several healthy ears, if this experiment is made two or three times, we seldom fail to recognise one or two vessels becoming filled with red blood along the course of the malleus.

aperture. There are some cases of perforate membrana tympani, where, from obstruction in the upper part of the Eustachian tube, or granulations in the middle ear, this cannot be effected. If the patient be able to inflate the tympanum by this method, we may then remove the speculum, and, applying our own ear, either directly or through the intervention of a stethoscope, over the external auditory passage, the same method of inflation should be again had recourse to, and the peculiarity of sound which is thus produced in the middle ear, whether the ordinary normal rush of the air into the tympanum, or a prolonged squeeling or gurgling sound, such as might be produced by any contraction in or thickening of the walls of the Eustachian tube, or by dryness, or by accumulation of mucus in it or in the cavity of the tympanum, is heard. The stethoscope should also be applied over the mastoid process, and the same series of observations made upon the sounds, if any, produced there.

If the patient be unable to inflate the tympanum, and that we have reason to suspect some obstruction of the *Eustachian tube*, or an accumulation of mucus, blood, pus, or other matter, in the tympanum, we may then, should the case require it, proceed to inject air, by the mechanical means of a catheter and pump, through the Eustachian tube(a) into the cavity of the tympanum, while we carefully note the result by means of a stethoscope, or the ear applied externally. It must, however, be particularly borne in mind, that if the patient is labouring at the time under acute inflammation of the drum or its membranes, or the lining of the Eustachian tube, the catheter is not only inapplicable, but highly injurious. The effort of coughing, sneezing, blowing the nose, and deglutition, in causing or increasing pain, is also to be particularly attended to.

There are two methods of examining the ear, on which, from their frequency in this country, I am induced to make

(a) I have latterly found it very seldom necessary to resort to this operation, as the cases in which it is applicable are of much greater rarity than is usually supposed, or as the works of aurists would lead us to believe.

some remarks, in the hope of putting a stop to practices not only useless, but in some cases highly injurious. I allude to the common resort of syringing, and also of probing the ears indiscriminately, and without proper inspection of the parts. The former is of daily occurrence. A patient labouring under deafness, or, what perhaps is worse, violent pain in the ear, is examined either with the unassisted eye, or by means of some of the old divaricating specula, most probably in a badly-lighted apartment,—at all events, without the membrana tympani being brought into view, a dark cavity being all that the explorer has been able to perceive,—it is deemed advisable to try what might come out by squirting hot water into this dark passage for the ensuing quarter of an hour; but, nothing satisfactory following this operation, the diagnosis that there is no wax in the ear is accordingly made. Now, there may be a collection of cerumen, which may not be got rid of by this operation; while, if the cause of the pain or deafness is owing to an inflammatory condition of the auditory canal and its membranous extremity, a decided increase of the symptoms is produced by this unnecessary and cruel proceeding. Again, I have frequently seen inflammation produced by unnecessarily syringing an ear where no wax was present.

The practice of exploring an ear by means of a probe I cannot too strongly condemn, and yet that it is frequently resorted to surgeons are well aware. To introduce a probe down to the membrana tympani, without having that membrane fairly within view, and without a speculum being passed down to it, but merely for the purpose of satisfying the examiner as to whether the membrane is perforate or not, is, I think, a most unjustifiable proceeding.

The degree of *deafness* may be measured by holding an ordinary watch near the external meatus, and the distance at which the tickings can be accurately counted, and at which the patient is conscious of an interval between these sounds should be recorded. To effect this properly the watch should be ap-

proached gradually to the ear till it gets within the hearing distance, and again applied directly to the auricle, and gradually removed to some distance. It is absolutely necessary, if we wish to watch the progress of a case, not only to make these observations with great care, but also to make a written note of the *hearing distance* the first and each subsequent time we see the patient(a). By this means we have the most satisfactory report of the progress of the case, both to ourselves and the patient. We should also test the hearing with the mouth open as well as shut. This test of the hearing distance should be tried both before and after the inflation of the tympanum, as in many cases that act will produce a very material difference in the amount of hearing. The watch should next be applied both behind and in front of the auricle, and to the forehead, and also placed gently between the teeth of the patient, and the amount of hearing thus obtained likewise noted.

The state of the *throat*, the arches of the palate, uvula, tonsils, and back of the pharynx, should next be inquired into, particularly as regards the state of the mucous membrane, its colour and degree of relaxation. So also with that of the nose. The fore-finger should then be introduced far into the mouth, and its point made to press firmly upwards and outwards against the arch of the palate, opposite the mouth of the Eustachian tube, and notice taken of the degree of pain or inconvenience it produces in the middle ear.

I have thus described the routine of examination that will be found most practically useful. Having proceeded thus far

(a) Various instruments, producing a ticking sound by means of clock-work, have been invented, by Schmalz and others, for this purpose, but the watch is quite sufficient. It must be remembered that there is almost as great a difference in the normal hearing distance as there is in the seeing distance, even among persons who have never laboured under any disease of the ear, and who are not at all conscious of any defect of hearing.

The degree of hearing with a watch is sometimes deceptive; some patients who cannot hear a watch or even a clock, will hear the voice, even in a low tone; but these are the exceptions to the rule.

we may inquire into the history of the case, its duration, probable cause, and subjective symptoms, the pain, noise, &c., in the usual manner in which we would proceed to examine any other medical or surgical case. There are, however, two inquiries which should be particularly made: first, as to the probable hereditary nature of the complaint; and, secondly, as to the existence of *tinnitus aurium*; and, if such be present, what are the peculiar characters of it; how many kinds of noises are experienced; whether they are permanent or intermitting; under what circumstances they are decreased or diminished; and, above all, whether the patient refers them to the ears or the interior of the head; and whether one or both ears are equally affected by them.

While inquiring into the amount of deafness, and the circumstances under which the hearing is increased or diminished, we should learn whether it be improved or not when the patient is exposed to loud noises, as when standing in a mill, walking through a crowded street, or travelling in a carriage, &c. The general health of the patient, the performance of all his functions, and the endeavour to ascertain how much of the disease is purely local, or dependent upon some constitutional affection, will, no doubt, occupy the attention of an educated physician or surgeon, so that it is unnecessary here to call special attention to these circumstances.

In the foregoing remarks, which are chiefly intended as a guide to those who may be inclined to study aural diseases, I have confined them as much as possible to such as were applicable to the formation of a diagnosis in the inflammatory diseases of the ear or their results.

AUTHORITIES.

To review all the opinions of authors in a communication intended solely for practical purposes, and for the readers of a periodical, would savour more of the System or the Cyclopaedia than the occasion demands, or our space permits. Let the following references, therefore, suffice.

Myringitis, or inflammation of the membrana tympani, has not been recognised or described by authors until within the last few years: and its varieties, with their peculiar symptoms, are by no means accurately understood. Itard, one of the earliest and most esteemed writers upon aural surgery, has not mentioned it, though the symptoms of at least one form of the disease are enumerated by him under the head of internal otitis(*a*). The old divisions of inflammation of the ear into otitis externa and interna do not in any way assist either our diagnosis or improve our treatment of these diseases. The same may be said of the divisions into acute and chronic. The otorrhœa, which follows in such cases, and which formed, with many writers, grounds for nosological arrangement, being but a symptom, like leucorrhœa in the female, is an insufficient ground of diagnosis.

Lincke, whose work is well worthy of being translated into English, classes the aural inflammations according to their causes, as the erysipelatous, scrofulous, syphilitic, rheumatic, catarrhal, morbillose, variolous, scarlatinous, &c., &c.; but the exact locality or seat of the original inflammation, or the peculiarity of the appearance of such, is not specified. These are merely enumerations of diseased actions, generally characterized by muco-purulent discharge, attendant on, or following these different affections. The Leipzig physician, however, was one of the first accurate describers of the "*Entzündung des Trommelfells*," the true Myringitis(*b*).

Kramer devotes a chapter to the consideration of acute inflammation of the membrana tympani, but upon a careful perusal of it we find about three pages devoted to the description of that disease, while the remainder is occupied with the consideration of polypus, and a detail of the various methods recommended for performing perforation(*c*).

(*a*) *Traité des Maladies de l'Oreille et de l'Audition*. Deuxieme edition, Paris, 1842.

(*b*) *Handbuch der theoretischen und praktischen Ohrenheilkunde*. Leipzig, 1837.

(*c*) *The Nature and Treatment of Diseases of the Ear*, translated by

Mr. Pilcher disposes of the inflammation of the membrana tympani in a few pages, but enumerates most of the symptoms of the affection (except the minute appearances of the membrane), under the head of otitis interna(*a*).

Mr. J. W. Jones, in the article "Ear and Hearing, Diseases of," in the Cyclopædia of Practical Surgery, has given a short description of one form of the disease. I cannot, however, agree with him, that in "otitis interna morbid changes occur in the membrana tympani only when it is threatened with bursting by the matter accumulated in the cavity of the tympanum, and has also become involved in the inflammatory action." On the contrary, my experience leads me to believe that inflammation of the middle ear always, and at the very commencement, is shewn by the appearance of the membrana tympani; and this observation must remain undisputed until a sufficient number of accurate examinations shall have been made, in the commencement of cases of otitis interna, to negative it. I may affirm the same of ear-ache, otalgia, neuralgia of the ear, &c.; but of this hereafter.

It is quite plain from Dr. Williams's account of the "inflammation and ulceration of this membrane," that he never *examined* the membrane in this condition. Indeed, I doubt if he ever *saw* the disease under consideration(*b*).

Dr. Copland, in his compilation of aural affections, has quoted the best authors on this subject, and may be consulted with benefit(*c*).

Dr. Martell Frank has lately given a concise but faithful description of both the acute and chronic form of the disease(*d*).

Dr. J. R. Bennett. London, 1837. See also his recent work, *Beitrage zur Ohrenheilkunde*. Berlin, 1847. I shall refer to this latter farther on.

(*a*) A Treatise on the Structure, Economy, and Diseases of the Ear. London, 1838.

(*b*) Treatise on the Ear, including its Anatomy, Physiology, and Pathology. London, 1840.

(*c*) Dictionary of Practical Medicine, &c.—Articles Ear, and Hearing. Parts III. and IV.

(*d*) Already quoted at note, p. 382.

M. Hubert-Valleroux does not even enumerate the inflammation of the membrana tympani in his catalogue of aural diseases(*a*).

Schmalz has done little more than glance at the disease. He has evidently mixed up the description of its symptoms with those of other inflammatory affections of the ear(*b*).

I have connected, in the heading of this communication, the inflammations of the membrane of the tympanum with those of the middle ear, because I do not believe it possible for one to exist independent of the other for any length of time, no more than an ophthalmia can be circumscribed: or than we can by the term iritis define simple uncomplicated inflammation of the membranous diaphragm of the ocular chamber.

When I first commenced the study of aural diseases, I believed that the deafness and tinnitus, in most cases where I had no positive evidence of disease in the meatus or membrana tympani, was caused by some defect in the nerve of hearing, or what is termed "nervous deafness." As, however, my field of observation extended, and as my knowledge of the healthy appearance of the membrane improved, I gradually began to find that the instances of deafness with *perfectly healthy* tympanal membranes which fell under my observation were comparatively few, while I became daily familiarized with a variety of pathological appearances in these structures, which I am now fully convinced are the result of different forms of inflammation of an acute or chronic nature, arising from some idiopathic or specific cause. These appearances have naturally led me to pay particular attention to those diseases in their early stages, the only period in which, in most of them, art can be of any avail(*c*). These appearances I shall endeavour to describe in the following essay.

(*a*) *Essai Theorique et Pratique sur les Maladies de l'Oreille*. Paris, 1846.

(*b*) *Erfahrungen über die Krankheiten des Gehöres und ihre Heilung*. Leipzig, 846.

(*c*) If we examine the inmates of a blind asylum we are at once struck

Mr. Toynbee, in his very valuable contributions to the morbid anatomy of the ear, published in the *Medico-Chirurgical Transactions*, has shewn the frequency of lesions of the middle ear, the result, no doubt, of inflammatory action; it is, however, to be regretted that the symptoms exhibited during life by the persons from whom his preparations were taken have not been recorded(*a*).

Dr. Kramer, in his late work, *Beitrage zur Ohrenheilkunde*, has given an extensive statistical table of diseases of the ear. The number of cases which he has recorded amounts to 2000, but of this number it must be remembered that 208, or one-seventh of the whole, were diseases of the auricle and external auditory passage. He includes all the diseases of the tympanal membrane with those of the external ear, whereas in my opinion they belong equally, if not more so, to those of the middle ear; indeed I believe that the chronic as well as the acute inflammation of the membrane is accompanied by disease in the middle ear more frequently than disease in the auditory passage. Of the 2000 cases observed, the inflammations of the tympanal membrane amounted to 442, or something less than one-fourth of the whole. Of these cases 45 were acute, and 397 chronic inflammations. About one-twelfth of the whole, or 164 were inflammations of the middle ear, but which he does not tell us were originally connected with, or subsequently produced changes in, the tympanal membrane. If in these 164 cases the inflammation of the mucous membrane of the middle ear was confined to that lining the bony parietes of this cavity: not extending over the extensive surface stretched over the back of the membrana tympani, not propagating inflammatory action there, with the fact that nine-tenths of the cases of loss of vision there presented are the result of inflammatory action; the cases of pure unmixed amaurosis are comparatively rare, either on account of their actual scarcity, or because the patients so affected have already been carried off by the cerebral disease which was the original cause of their blindness.

(*a*) *Med. Chir. Trans.*, vols. vi. and viii., second series.

and producing the effects of inflammation upon transparent or diaphanous membranes, as we see it does upon the aqueous membrane lining the back of the cornea, then have we no analogy for such a state of things in any of the other departments of pathology? To these 164 cases of inflammation of the lining of the tympanum, he has added thirty of alterations in the Eustachian tube, and four of inflammation of the periosteum; in all, 198, or one-tenth of the whole. Among the diseases of the ear he has included 46 instances of deaf-dumbness. With most of these statistics we find no fault; and to the various tables exhibiting the causes, ages, sexes, &c., we must, in common with all who will examine them, award to the zeal and industry of their author the amount of credit which they deserve.

When, however, we come to examine into the chief cause of deafness enumerated by the Berlin aurist, we at once perceive that his favourite theory of "nervous deafness" has been pressed into the service, and this item made to exhibit a magnitude which we have strong hopes of seeing Dr. Kramer himself one day criticise with more severity than we are now willing to do for him. Of the entire number of cases recorded, 1028, or somewhat more than one-half of the whole, are set down as "*Nervöse Taubheit.*" It would occupy more space than we are able to devote to this portion of the subject, to enter at any length into a discussion calculated to shew the fallacy of the reasoning adduced by the author to satisfy his readers that these were absolute cases of nervous deafness. The most that can be said of these 1028 cases, many of which must, we doubt not, have been caused by affections of the auditory nerve, is, that in these the parts capable of inspection exhibited no symptoms of disease. In which case, he says, "the use of the ear-catheter is the only means, either by blowing through it, or by injecting compressed air from the air-press, or by the introduction of a catgut string, or a small whalebone, or ivory probe, to learn the condition of the Eustachian tube and the cavity of the

tympanum, and thereby, in the cases in question, to judge of the condition of the auditory nerve,"—p. 26. But even this hazardous mode of making an examination,—by introducing a foreign substance into the cavity of the tympanum!—is at best but a negative proof. By it the condition of the ossicula, the membranes of the fenestra ovalis and the foramen rotundum, the fine mucous membrane, with its nerves, lining the tympanic cavity, the state of the labyrinth and the internal ear, or the brain, *cannot be investigated*(a). Is there any other organ of sense in which the affection of the nerve bears the same proportion to all the other diseases of the part as this?—would any table of the affections of the eye be acknowledged as authentic, in which more than one-half of the diseases of that organ were ascribed to amaurosis, or amaurosis not consequent upon some inflammatory condition?

The accompanying table of 708 cases of aural disease, registered at St. Mark's Hospital during the last three years, although, no doubt, liable to the defects under which the investigation of these diseases still labour, gives, without going too minutely into the subject, a tolerably good idea of the proportion of the inflammatory to the other diseases of the ear, most common among the lower orders of Dublin.

The details of this table are to be found in the annual reports of the institution. During the year 1834-35, I was not as

(a) I have heard of cases in which the middle ear has been said to be explored by such mechanical means, even in this country, and I have been shewn steel sounds manufactured for the purpose. Such instruments are, however, with the exception of the tearing and inflammation which they may cause in the nasal extremity of the Eustachian tube, perfectly harmless, for they could not by any possibility, even in the dead subject, be passed through the upper end of the Eustachian tube. The only instrument I ever venture to pass into the drum is a fine ivory bougie, rendered flexible by having its earthy material extracted by means of an acid. In employing this instrument, a large-sized catheter should first be passed into the bell-mouth of the Eustachian tube, and the bougie, with about half an inch of its extremity previously softened by immersion in warm water, should then be introduced through the catheter and passed up with great gentleness and caution through the Eustachian tube into the middle ear.

intimately acquainted with the pathological appearances of inflammatory action as I am at present. In the tables published for that year, the cases set down to nervous deafness amounted to thirty-two out of 184; but from the subsequent tables, and more careful examinations, I am inclined to think that the number of cases registered under this head for that period were exaggerated.

DISEASES.	AGES AND SEXES.										
	Under 5		6 to 15		16 to 30		31 and up.		Total.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Gen. Tot.
Otitis,	3	1	9	3	8	6	9	8	29	18	47
Acute Myringitis, . .	..	2	4	5	10	9	4	5	18	21	39
Chronic Myringitis, .	..	1	8	6	15	15	20	17	43	39	82
Abscess in Mem. Ty.,	..	..	1	..	..	..	1	..	2	..	2
Granular Mem. Ty., .	..	..	..	..	1	1	2	1	3	2	5
Collapse of do., . . .	..	..	1	1	1	1	1	5	3	7	10
Otorrhœa,	13	8	39	38	31	37	10	9	93	92	185
Do. with Polypus, . .	..	..	7	5	6	3	2	1	15	9	24
Do. with Perforation,	..	..	1	..	1	1	..	1	2	2	4
Nervous Deafness, . .	..	1	9	4	11	14	34	21	54	40	94
Tinnitus Aurium, . .	..	..	..	..	1	7	2	4	3	11	14
Otalgia, . . . . .	..	..	..	..	1	1	1	1	2	2	4
Hæmorrhage from Ear	..	..	..	..	1	..	..	..	1	..	1
Deafness from Ceru- men,	1	2	8	8	14	12	73	43	96	65	161
Chron. Infl. of Exter. Meatus, . . . . .	..	..	2	1	4	3	..	3	6	7	13
Contraction and Ulce- ration of do. . . . .	..	..	1	..	..	..	..	..	1	..	1
Eczema of Auricle and Meatus,	3	1	2	1	1	2	..	5	6	9	15
Congenital Malforma- tion, . . . . .	..	..	..	..	1	..	..	..	1	..	1
Deafness from Disease of Throat, . . . . .	..	..	2	1	..	1	1	1	3	3	6
	20	16	94	73	107	113	160	125	381	327	708

The foregoing Table does not include all the diseases enumerated in my nosology, but for the purposes intended too minute a division would be disadvantageous. From this Table the proportion of cases of nervous deafness to those the result of inflammatory action are but 1 in 5, to speak in round numbers.

I have become acquainted with the following forms of inflammation of the membrana tympani:—

I. Acute inflammation of the membrana tympani, accompanied by inflammation of the cavity of the tympanum; frequently of a rheumatic character.

II. Subacute inflammation, unaccompanied by pain.

III. Chronic inflammation, with or without inflammation of the tympanum.

IV. Strumous inflammation.

V. Syphilitic inflammation.

VI. Febrile subacute inflammation, accompanying the exanthemata and other fevers; generally producing otorrhœa (already described in Part I.)

I. ACUTE MYRINGITIS.—HISTORY AND SYMPTOMS.

In *acute inflammation* of the membrana tympani, the vascularity is generally seated in the true, fibrous membrane of that structure, and is usually the result of cold, and often attributed to rheumatic diathesis: sudden exposure to a low temperature, blasts of harsh cold wind, diving in the sea, foreign bodies, and irritating substances introduced into the external ear, &c. The auditory canal, and sometimes even the auricle, is engaged; and although we are not able to observe the precise pathological condition of the cavity of the middle ear, or its investing membrane, there can be little doubt but these parts, sooner or later, participate in the general inflammatory action. As, however, we denominate that form of internal ophthalmia which chiefly or primarily attacks the iris, an iritis, although in the severer forms of that affection, several if not all, the other textures of the eye eventually become engaged, so in inflammations of the membrana tympani, to which the term myringitis is applicable, we must expect that sooner or later the adjoining structures,—the mucous membrane lining the tympanum, with its numerous nerves, the nerves themselves which cross this cavity, the mastoid cells, the investitures of the Eustachian tube, the membrane of the fenestra ovalis and fenestra cochleæ, the muscles, ligaments, and other connexions of the ossicula,

the labyrinth, the internal ear, and the auditory nerve itself,—must sooner or later participate in the unhealthy action going forward; and must, either directly by the inflammatory lesion, or its subsequent effects, serve to impair hearing, and cause organic changes in this delicate organ. But in addition to the changes analogous to those which occur in ophthalmic inflammations, we have here, from the peculiar anatomical structure of the ear, superadded an extension of disease to parts which not only destroy the sense of hearing but prove dangerous to life, as when the periosteum, the bone, and even the membranes of the brain, or the encephalon itself, become engaged. The dermal structure of the membrana tympani also partakes of the abnormal action, and, together with that of the auditory canal, pours out a muco-purulent secretion, or even pus itself,—is occasionally raised into vesicles, becomes the seat of pustules, ulcerates, throws out granulations, and becomes thickened, &c., during the progress of this disease. The true fibrous membrane passes through all the pathological changes to which such structures are liable from inflammatory action or its results; and although the precise anatomical condition of the two may not be analogous, yet the diseases of the cornea and of the membrana tympani bear a remarkable analogy, particularly in the subsequent appearances of vascularity, thickening, opacity, morbid deposits, &c., which they present, together with adhesions by bands of membrane to the parts within the chambers, to which they form the external boundaries;—while inflammation of the lining of the meatus auditorius, the auricle itself, and the periosteum of the cranium adjoining, particularly over the mastoid process, is a very formidable and by no means uncommon symptom.

The following are generally the order of symptoms. A seizure of sudden and intense *pain* in the ear itself, generally, first appearing at night, and attended with nocturnal exacerbations during the progress of the disease. This pain is of a most excruciating kind, producing at times delirium, and

is usually likened to that of a sharp instrument penetrating through the ear to the brain: this pain, especially when the cavity of the tympanum is injured, is increased by coughing, sneezing, chewing, or swallowing, or by pressing upon the tragus, particularly when the jaw is open. The beating of the carotid is distinctly felt in the ear, and each throb of the artery, particularly if the circulation be excited, increases the suffering. There is also a feeling of fulness, and bursting within the organ frequently; with this, there is pain and soreness over the side of the head, in the teeth, in the eye and temple, and in the superior lateral triangle of the neck; with occasionally stiffness and soreness of the upper portion of the mastoid muscle, and often flying, rheumatic pains throughout the body, particularly in middle-aged persons, and those who have previously suffered from rheumatic attacks. If neglected, or unrelieved by treatment, the pain extends to the throat and mastoid region, and is increased on pressing the mouth of the Eustachian tube with the finger. The severity of the pain experienced is to a certain degree a test of the extent of the inflammation; and the peculiarity of the pain is also a means of judging of the exact seat of the inflammation. If pain is experienced in swallowing, mastication, or sneezing, &c., we may presume that the inflammation has extended to the middle ear.

A very curious impression exists among, and is too frequently acted on by the profession, that ear-ache is a *neuralgic* affection. To this very general mistake must we attribute the practice, so frequently and empirically resorted to, of pouring into the ear the various nostrums, sedatives, and stimulants, calculated to allay pain in external parts. So rare is true neuralgia of the ear, that Dr. Kramer says, he “never observed ear-ache without evidence of inflammation either of the meatus or of the membrana tympani;” although I am not prepared to say that such an affection does not occasionally exist, I must say that I cannot, at this moment, tax my memory with a single instance

of so-called “nervous otalgia,” for which I have been consulted, that upon a careful examination I could not discover some direct *visible* cause for it: and I must, therefore, with Dr. Kramer, “deny to those persons the right of pronouncing a decisive opinion on the existence of a nervous otalgia, who do not understand investigating the membrana tympani in bright sunshine, and with the aid of the speculum, and who are not in the habit of doing it.”(a)

Usually coincident with the seizure of pain, the patient complains of *tinnitus aurium*, and the noises to which this symptom is compared are as various, and the accounts given of them even more incongruous, than those of *muscæ* in the eye, to which, in some instances, they bear an analogy. These consist of a dull throbbing, or pulsation,—a loud pumping like that of a steam-engine,—with the occasional supervention of a noise, varying in loudness and intensity from the ticking of a watch to the striking of a loud clock; but the most usual simile given by patients in describing those ear-noises is that tidal sound perceived on holding a conch-shell to the ear. In the severer forms of aural inflammation, patients very frequently liken this unpleasant symptom to the falling of water, the dashing of a cataract, or that peculiar rushing sound produced by the sudden escape of water through a large pipe or sluice-gate. In the more mitigated forms, and the more advanced and chronic stages of these aural inflammations, we generally find the sounds of a hissing or blowing character, and usually likened to the singing of a kettle, the noise of a distant storm, the fluttering of the leaves of trees, the chirruping of birds, the distant ringing of bells, a dull cooing in the ear, musical sounds of various kinds, the buzzing of bees, blowing of a bellows, whistling, and other noises of a similar character, for which the fer-

(a) Not long ago, a practitioner, relating to me the history of a case of typhus fever which had proved fatal to a mutual medical friend, summed up the symptoms with the enumeration of “abscess of the base of the brain,” because he had discharge from the ear, although neither the ear nor the contents of the cranium were examined!

tility of the patient's imagination finds a ready similitude. Any increase of the circulation, or nervous excitement of any kind, particularly in chronic cases, invariably makes these ear-noises worse. We would earnestly call the attention of those engaged in the study of aural diseases, to the subject of tinnitus, as it is more than probable that a knowledge of the peculiarities of this symptom may yet be found to assist in the diagnosis of particular forms of deafness.

Deafness,—consisting either of impaired hearing or total loss of that sense on the affected side, coming on either contemporaneously with the pain, or succeeding it in a few hours after. If, however, but one side has been attacked, the patient is not at first conscious of his loss of hearing. In some rare cases there is for a short time during the progress of tympanal inflammation an exaltation of the sense of hearing, in which (like photophobia in ophthalmia) all sounds become intolerable.

To these local subjective symptoms may be added the following constitutional ones: increased heat of skin, headach with a feeling of weight in the head, sometimes well-marked hemicrania, great distress and anxiety of countenance, sneezing, coughing, and other symptoms of catarrh, sleeplessness, restlessness, some quickness of pulse, occasionally rigors, in some instances delirium, and even, in very bad cases, all the symptoms of cerebral disease, of which Case II. is an example. The digestive organs are seldom much engaged in the progress of the disease; the urine becomes high-coloured, and, towards the termination of the acute symptoms, deposits a copious pinkish sediment. The circulation, except in very severe cases, is seldom much affected.

The objective symptoms, or physical signs, consist, in the severe cases, of heat, pain, and slight erysipelatous redness of the auricle: in very aggravated cases, heat, fulness, and œdema, as well as pain over the mastoid region: in ordinary cases, slight tumefaction of the lining of the external meatus; complete cessation of the cerumenous secretion; a bright pink-

ish colour, and a swelling and polish of the membrane lining the auditory canal, which is streaked with long tortuous vessels: accompanied by heat and itching of that part.

The membrana tympani first loses its polish, then its semi-transparency,—becomes in the early stages, and in very mild cases, of a dull yellow, but this is variable and seldom seen; the most usual colour varies through all the shades of red, from a slight pinkish hue to that of a dark damask rose tint, and is caused by the different degrees of vascularity produced by the greater or less intensity of the inflammation. Soemmerring has faithfully represented the arteries of the tympanal membrane in the normal condition as two long vessels proceeding from above downwards and backwards along the course of the handle of the hammer, and branching on either side into the anterior and posterior vibrating thin portions of the membrane. During inflammatory action, however, like as in the coats of the eye, new vessels seem to start into existence, and to branch and inosculate till the whole seems one mass of bright or livid red. Generally speaking, the upper portion around the attachment of the head of the hammer is the first to become vascular, the last to regain the natural hue, and the part in which the colour becomes deepest. The vessels along the handle of the hammer are always well marked, though the line of attachment of that bone remains for a long time whitish, owing to the intimate connexion of the membrane to it at this part. Around the circumference of the membrane, within the ligamentous ring, particularly at its lower and anterior part, an areola of short vessels form a circle of almost a line in breadth; they all run towards the centre, and, when well marked, look like the zone seen in iritis, or, which is perhaps a better simile, the zone observed in the cornea in the commencement of cornitis, to which disease the appearances seen in myringitis bear a great resemblance. It is only in the early stages, or when the redness is disappearing, that this peculiar peripheral vascularity is well-marked. With this general

redness may in some cases be seen well-defined patches of ecchymosis, generally on the anterior vibrating portion; and as the vascularity increases, even the exact position of the manubrium cannot be recognised,—all is one red mass. The membrane also becomes swollen, and its surface apparently villous; rarely vesicles, and still more rarely pustules and small abscesses, form on its surface. Ulcers occasionally form upon it; these usually occupy the anterior part of the lower vibrating portion, but I have occasionally seen them situated posteriorly. It is possible that they may have commenced as vesicles or pustules, but we require more extended and minute observations to determine this point. Exudation of muco-purulent secretion, with detachment of the cuticle, both from the surface of the membrane and the parietes of the canal; perforation of the tympanal membrane, either by rupture, abscess, slough, or ulceration, but which it is not always easy to determine, also occur occasionally. The rupture usually takes place in the anterior portion, and close to the opening of the Eustachian tube; sometimes it may be seen as a round or oval hole, about the size of No. 8 shot, and appearing as if punched out of the membrane. In other instances the rupture takes place at the anterior inferior edge of the membrane, in which case the lower margin of the aperture is formed by the parietes of the canal, and cavity of the tympanum. In still rarer instances the rupture takes place in the posterior division of the membrane, below, and somewhat behind, the point or handle of the malleus.

In this condition, with the cavity of the tympanum open, poly-poid growths occurring in the meatus, and granulating over the surface of the tympanum and its membrane, and a copious and very often foetid discharge pouring both from the auditory passage and the drum, the case becomes one of otorrhœa, the peculiar symptoms and management of which I have already detailed in my former Essay.

Besides the peculiar vascular condition of the membrane

already referred to, lymph is very frequently effused between the laminae, in the substance of its proper fibrous tunic, and there can be little doubt that, in the severe forms of the disease, this morbid product is poured out in large quantity upon the surface of the tympanum, the membrane of which must partake largely of the inflammatory action so visible in the external septum. That these lymphic exudations,—both by thickening the tympanal membrane itself, and by acting in a similar manner upon the lining of the cavity of the tympanum and the parts contained within it, by bands of adhesion within its walls, thus drawing inward and arresting the vibrations of the membrana tympani, curtailing the motions of the ossicula, injuriously affecting the membranes of the fenestrae, and particularly by impairing the functions of those tympanic branches of the glosso-pharyngeal nerves which ramify on the mucous membrane,—are the principal causes of deafness, I have little doubt.

When rupture takes place, and that accumulations of blood, mucus, or purulent matter, pent up within the tympanum, are evacuated, relief is generally experienced.

In cases where neither rupture nor ulceration has taken place, as the disease advances, the vascularity of the tympanic membrane decreases, first in the centre of its vibrating portion, then around its circumference, and finally along the malleolar attachment. The membrane assumes a muddy, yellowish, opaque colour; after this clears off we find it opaque throughout, or in spots; sometimes these opacities can be plainly discovered upon the interior of the membrane, like the speckled opacities seen upon the membrane of the aqueous humour. In other cases, the result of the inflammation is seen in the uniform greyish-white opacity, similar to leucoma of the cornea; and in time, as the superficial polish is restored, the membrane presents a pearly aspect very different from the semi-transparent character of the healthy condition.

A not uncommon effect of inflammation of the tympanum

and its membranes, particularly when allowed to run its course unchecked, is a drawing inward of the membrana tympani. In such cases the handle of the hammer forms the most projecting point seen at the bottom of the auditory canal; and the anterior and posterior divisions of the membrane can be distinctly seen forming deeply curved folds upon either side of it. At times the membrane can be elevated to its natural position by inflating the drum through the Eustachian tube; but in such cases, as soon as the pressure from within is removed, it immediately resumes its former position. Considerable discussion has occurred among authors as to the possibility of collapse or falling inward of the tympanal membrane, occurring from shocks or loud noises, &c. This is not the place for investigating that question, but of the existence of the pathological condition which I have thus described, and of its being sometimes the consequence of inflammatory action, I have no manner of doubt. It is a peculiarity I demonstrate to the class at the hospital daily. Mr. Toynbee's dissections confirm my observations on this point, and, in some instances, explain the cause, namely, adhesive bands existing between the back of the membrane and the inner wall of the tympanum.

In anatomical preparations, however, it must be remembered that it is the position that the parts are most likely to assume; and, moreover, it is not an uncommon peculiarity even in persons who have never suffered from any affection of the ear, *of which they were conscious*, and who were not aware of their hearing being in any way impaired until tested by the watch.

The inflammatory process must, in severe cases, also extend into the mastoid cells; the periosteum lining the bony portion of the auditory canal will in time become engaged, as well as the pericranium over the mastoid process, and post-aural region of the skull, and present the appearance, already described. If allowed to proceed unchecked, either by the efforts of nature or art, the death of the bone beneath will follow; while, in cases still

more severe, the entire petrous portion of the temporal bone will become inflamed,—the dura mater will separate from it,—purulent deposit takes place in the cavity thus produced,—the brain, as well as its investments opposite those portions, will partake of the inflammation,—and death follow, either from abscess or diffuse inflammation of the cerebrum or cerebellum.

During the progress of the inflammatory action in the tympanum and its external membrane, the throat, in some cases, becomes engaged its mucous membrane, presenting a copperish red appearance, and becoming swollen and infiltrated. The tonsils also become swollen; there is some difficulty of deglutition; and if an examination of the pharyngeal extremity of the Eustachian tube be made with the finger, according to the method described at page 384, considerable pain is experienced in the track of the tube, as well as in the middle ear. There can be little doubt of the inflammatory condition of the middle ear, extending over the Eustachian tube, and causing such thickening and obstruction of its lining membrane, with, perhaps, an accumulation of mucus, as greatly impedes the transit of air into the drum, and causes that peculiar feeling of stuffing, and occasional sudden bursting in the middle ear, of which we are all conscious when labouring under influenza or catarrh.

The nose sometimes partakes in the unhealthy condition of the neighbouring mucous membrane, and the feeling of stuffing in that part, together with much faucial respiration, is not an uncommon attendant upon acute inflammation of the middle ear and membrana tympani.

In some rare cases, paralysis of the muscles of the face, on the affected side, presenting all the peculiar phenomena of that disease, is produced; an instance of which will be given in one of the cases (although in the chronic form) to be related hereafter. I am strongly inclined to think, that many of the cases of paralysis of the seventh pair of nerves, where we have no mechanical lesion, such as caries or exfoliation,

and which heretofore were usually attributed to cold, &c., may have been caused by some form of otitis; and I would therefore beg to direct the special attention of physicians to the peculiar condition of the ear in all such instances.

This form of inflammation chiefly attacks the young and middle-aged; one ear is much more frequently affected than both; the light-haired and fair-complexioned are more liable to it than the dark. So much more frequent are its attacks in spring than at any other period of the year, that it sometimes seems to be epidemic at that period. The duration of the disease varies from six to fourteen days, but may last a month, and its effects several months.

TREATMENT.

The temperature in cases of acute myringitis should be strictly attended to; the patient should, if possible, be confined to a warm well-ventilated apartment, or if obliged to go abroad, the cold air should be carefully excluded from the ear; but in the severe form of the disease it is absolutely necessary to confine the patient to bed.

Depletion is strictly enjoined, but I have seldom found it necessary to resort to general bleeding. Local depletion is imperatively required, either by cupping or by leeches: the former is not easily managed so near the part affected as to be of much service; in cases, however, of very severe internal otitis, it may be had recourse to, and a dexterous cupper will abstract several ounces of blood from the soft parts immediately behind and beneath the mastoid process; and if the head be much engaged, blood may be abstracted by the same means from the nape of the neck. Leeches are, however, the most effectual means of abstracting blood and relieving pain in all such cases. They should not, however, be applied in the usual manner behind the mastoid process: to be of service they must be applied with a leech-glass immediately around and within the external meatus; in the fossa behind the tragus, and, if necessary, in front of that pro-

minence, in the hollow formed by depressing the jaw(*a*). From four to six leeches may be readily applied around the meatus, and in this situation they will produce more permanent and immediate relief than three times the number affixed over the mastoid region. The application in front of the tragus is also very much more effectual than upon the mastoid region. When, however, the latter locality becomes itself the seat of inflammatory action, they should also be applied freely all over it. Where we have already recently applied leeches in the two first-mentioned localities, and that the parts have thereby become swollen and irritated, the next most advantageous position is beneath the lobe of the auricle, behind the ramus of the jaw. I do not know any painful affection in which leeches applied in the manner directed produce the same amount of immediate relief, as in the disease under consideration. They should be had recourse to again and again, even upon the same day, to relieve paroxysms of pain, as well as to lessen the degree of redness and vascularity observable.

The application of heat and moisture is particularly grateful in such cases; steaming the ear by holding it over the vapour of some very hot water placed in the bottom of a long, narrow vessel, medicated with hyosciamus, opium, belladonna, or with the ordinary decoction of marshmallows, camomile, or poppy-heads, if faith be placed in such, gives great comfort. The Russians employ a peculiar apparatus for relieving pain in the ear, consisting of a funnel-shaped roll of linen, the small end of which is applied to the meatus, while the large end, in which various balsamic substances are placed and set fire to, is allowed to burn down slowly like a moxa. A warm linseed-meal poultice renewed every two or three hours, and particularly applied at bedtime, gives great relief. Stupes and fomentations are not, I find, as efficacious in aural as in ophthalmic inflammations.

(*a*) A morsel of cotton should be inserted into the auditory canal before applying the leeches; this prevents their going in too far, and also excludes the blood, and keeps it from collecting and clogging within the passage.

The bowels should in this, as in all other febrile diseases, be opened, but the condition of the digestive organs does not appear to influence the inflammatory affections of the ear as much as they do those of the eye. The state of the skin, however, which is generally hot and dry, requires our more especial attention; and sudorifics are, in the early stage of the disease, decidedly indicated. Having leeches, fomented, and, if necessary, purged, James's Powder, combined with small doses of blue pill and henbane, will be found very efficacious. Abstinence from animal food, and the use of the pediluvium, together with all such means as are calculated to allay inflammation and febrile excitement, should be had recourse to.

Counter-irritation, by means of small blisters applied upon the bald space behind the auricle, and below the lobe, are advantageous in the more advanced stages of the disease, and after local depletion has been fully employed. Generally speaking, blisters are too much relied upon, or applied too early in the disease; but as it advances they will be found highly useful, and the surfaces which they expose may with advantage be dressed with mercurial ointment.

Having resorted to all those means, we should, if the symptoms,—not only of pain and deafness, but of the redness and vascularity of the tympanal membrane,—remain unrelieved, at once have recourse to the use of mercury. Indeed I am now so fully convinced, not only of the utility, but of the urgent necessity of employing mercury in these aural inflammations, that I do not hesitate to recommend its use in the early stages of all such affections. A pneumonia, a pericarditis, an inflammation of a large joint or a serous cavity, an iritis, or other form of internal ophthalmia, may, it is true, get well by simple depletion, &c.; but will any experienced practitioner of the present day risk such a case without having recourse to mercury? For the reasons applicable in these instances; from the peculiar effect which mercury exercises, not only in most inflammations, but especially over those of fibrous membranes; and in order to

arrest the exudation of lymph, and to cause the absorption of those effusions which, by thickening the membranes, and causing those pathological effects to which I have already so frequently alluded, and which prove so constantly the cause of subsequent deafness,—as well as the urgent necessity for arresting the progress of inflammation in a part that may prove destructive to life,—it is, that I so strongly advocate the employment of this remedy. I find that, in most instances, where it is employed early, it produces, as soon as it affects the system, as well-marked an improvement in all the symptoms as it does in any of the other inflammations which I have enumerated. It should, therefore, be given in small, frequently-repeated doses; and the formula I find most efficacious is calomel and blue pill, guarded with opium, and, if the stomach will bear it, a very small quantity of James's Powder. Not only should the gums be touched, but the patient should be kept under its gentle influence for some days, in order to insure an ultimate beneficial result.

In the subsequent management of the disease, the iodide and bromide of potassium, or very minute doses of the bichloride of mercury, in some of the preparations of bark, will certainly hasten the cure, as well as promote absorption of the deposits and adhesions already alluded to. The treatment of the tinnitus which remains shall be considered under the head of the chronic form of the disease.

Under no circumstances should we pour any stimulating or sedative liquors into the ear(*a*). The state of the part

(*a*) From the frequency of this most unjustifiable practice in this country, I feel I cannot too strongly deprecate it. If there is one substance more irritating than another in the Pharmacopœia, it is poured, *secundum artem*, into the ear, to relieve pain, or cure deafness, to lessen or to increase the secretion of wax! This practice is often the cause of myringitis. Why are not these essential oils, stimulating liniments, this turpentine, creosote, tincture of cantharides, oil of origanum, &c., poured into the eye or injected into the urethra in cases of inflammation of these parts?

should be examined with a speculum daily, or oftener if necessary; and then, should we discover an ulcer, it may be touched with a solution of nitrate of silver applied upon a fine camel's-hair pencil. If otorrhœa has occurred either from mucous discharge from the external surface of the tympanal membrane and the auditory canal, or owing to pus or mucus escaping from the middle ear through an aperture in the membrana tympani, or from an abscess occurring in the walls of the external auditory canal, we should remove the discharge by very gently syringing the part with simple warm water, or the most bland, unirritating fluids; but during the high inflammatory process no astringent injections whatever should be employed.

If polypoid growths of any magnitude sprout suddenly from the auditory canal, they should be removed with the snare; and this, if properly done, does not give rise to any fresh attack of inflammation.

Should the mastoid process, or the parts covering it, become engaged, and that the methods already recommended fail to give relief, or that even an indistinct sense of fluctuation can be discovered, we should not long hesitate to make a free incision in the periosteum there, at least an inch in length. In performing this operation the head should be firmly secured, and supported against some unyielding substance, as the back of a high chair or the breast of an assistant. A stout scalpel is the best instrument to employ; it should be grasped so that the fore-finger and thumb may come down upon the blade, so as to leave about an inch of it uncovered. It should be inserted steadily till the point reaches the bone, which it should be made to traverse, for the full length of the incision. By this means we secure complete division of the periosteum. With regard to the line of the incision, circumstances may require its being made in other directions, but I find that it is most generally required parallel with, and about an inch from the attachment of the auricle. The knife should be drawn from below

upwards; and from the swollen state of the parts, the depth which we are sometimes obliged to introduce the instrument is often nearly an inch. The hæmorrhage, unless we wish to extract blood, may be arrested by placing a dossil of lint within the incision. The cut surfaces generally present the brawn-like appearance seen in phlegmonoid erysipelas. Although pus may not have been reached by the incision, still immediate relief is almost invariably experienced. The subsequent management of this particular part of such a case must depend upon the circumstance of exfoliation, &c. The treatment of the chronic form of the disease shall be considered in the subsequent part of this communication.

The following cases exhibit many of the phenomena detailed in the foregoing description. They are given at somewhat greater length than would be necessary, were the diseases of the ear as much attended to by the general physician or surgeon as they ought, or if the treatment of these diseases formed a part of the present system of medical education in these countries.

CASE I.—*Acute Myringitis and Tympanitis(a) in both Ears, with severe Head Symptoms; Recovery under the use of Mercury.*

Master J—, aged 12 years, with light hair and florid complexion (whose elder brother had been under my care a short time previously for chronic inflammation of the left, and acute inflammation of the right ear), had always enjoyed good health, and never had any aural affection, till Sunday, the 1st of August last, when he was attacked with slight pain in the right ear. Upon the Friday previous he had bathed in the open sea five times, and had dived frequently each time. Upon the day following he bathed three times, and also dived. He awoke on Sunday morning early with some pain in the right ear, but

(a) By the term myringitis we understand inflammation of the membrana tympani; and by tympanitis, inflammation of the cavity of the tympanum.

made no complaint of it, as he says it was but slight; it was accompanied, however, by a feeling of pressure, as if something was bursting out through the ear. He bathed, however, again, twice upon that day. Towards evening pain came on in the left ear, and increased greatly in the right. He retired to rest early, and having been reminded of the provocation for his pains, he made no further complaint. About twelve o'clock that night, however, his mother was awoke by his cries and moans, the result of the extreme agony which he was then suffering. A neighbouring practitioner was applied to, and some camphorated oil and laudanum dropped into the ear. This treatment, however, afforded him no relief, and he remained awake all night, moaning much, and complaining of the violent pain in his head and ears, which he likened to a sharp instrument penetrating from without.

I saw him on Monday morning, the 2nd, about ten o'clock; the face was flushed, and the countenance anxious and expressive of extreme pain. The pupils were rather more contracted than natural, and the eyes slightly sensitive to light; he had some heat of skin, but the pulse was not above 76; the bowels were constipated, and the urine natural. Upon examination the auricle and external meatus were found natural; considerable pain was experienced upon pressing the cartilage behind the articulation of the jaw, but pressure over the mastoid region was borne with impunity. Upon introducing a tubular speculum into the external meatus, the auditory canal was found of a light rose-colour, quite dry, and devoid of cerumen; the membrana tympani was distinctly seen of a deep pink colour, generally diffused over it, but increasing in intensity in a crescentic form round its lower insertion, and also in the line of the attachment of the malleus. The appearances were nearly the same on both sides. As this boy was brought to my house I had a better opportunity of accurately recording the state of the parts than one is usually able to effect in the sick chamber. The appearance of the throat was

normal; the finger pressed against the mouth of the Eustachian tube caused but slight increase of the pain. Moving the articulation of the jaw, the act of deglutition, mastication, or coughing, were scarcely attended with any aggravation of the symptoms. Pressing air through the Eustachian tube, by holding the mouth and nose, and making a forced expiration, was also unattended by any unpleasant symptoms, but it passed up with great difficulty. Hearing then unimpaired.

He was ordered to be put to bed; to take a purgative bolus, and to have two leeches immediately applied to the posterior margin of the external meatus, as far in as possible, on both sides. The leeches afforded some relief, but towards evening the pain returned with great violence. He became quite delirious about six o'clock; did not know his friends; and could with difficulty be retained in bed. I saw him about eight o'clock; he was then in high fever, but more sensible; there was great heat of skin; pulse 80, and fuller than in the morning; tongue clean; bowels had been fully opened; made water freely; urine limpid; no thirst; knows all his friends now, but does not pay much attention to what is going forward about him; is quite rational when spoken to; complains of intolerance of light; face has become more flushed and anxious; complains now of the great weight of his head, which he rolls about from side to side; has had no sleep. On examination I found that the redness of the passage and membrane of the drum had greatly increased since morning, but there was no tumefaction of either. Pressure or percussion of the mastoid process, and the infraaural region, was borne without wincing. Two more leeches were ordered to be applied over the articulation of the jaw, in front of the tragus upon each side, and small doses of calomel, opium, and James's Powder to be administered every third hour. The ear to be steamed over hot water, and a linseed poultice to be applied subsequently: scarcely any diminution of hearing.

Tuesday, 3rd. Has passed a sleepless night, raving occa-

sionally. All his previous symptoms continue unabated, in addition to which, he now, for the first time, complains of noise in his ears, which he likens to that of the sea or tide. This noise is, he says, generally diffused through the head as well as in the ears. The pain is somewhat increased. He says he feels as if a lance was running into his head; bowels free; gums and breath unaffected by the mercury: blisters ordered to be applied behind the ears upon both sides. During the night of Tuesday he again became violent, and did not know his friends. The urine became remarkably dark-coloured. He had no sleep. The mercury was steadily persevered in, and towards morning he complained of some soreness of his mouth and gums.

Wednesday, 4th. Countenance less anxious; pulse not so full; pain in ears and head very much less; mouth slightly sore; complains of pain in swallowing, which he refers to the middle ear; has now become very deaf, and complains of increase of noise; this noise he describes as now of two kinds,—a continuous, uninterrupted bellows sound, and an occasional ticking, like that of a loud watch, which commences and stops suddenly; passed another sleepless night; raved occasionally; pain has very much lessened; membrane and passage unaltered: interval between doses of mercury increased.

Thursday, 5th. He is much better in every respect; he has had no delirium since last report; lies quiet on his side; the light is still offensive to him; skin cooler; pulse 80; bowels free; mouth very sore; deafness still continues; noise in head not so violent; urine high coloured: mercury stopped. The membrana tympani and auditory canal are much less red; the occipital region was ordered to be shaved, and two small blisters to be applied behind the insertion of the mastoid muscles. On Thursday night he was remarkably tranquil, and had some sleep. His chief complaint now is of the soreness of his mouth from the effects of the mercury.

Friday, 6th. At eleven o'clock this morning he was sud-

denly attacked with acute pain in both ears, of a sharp lancinating character. Leeches were again applied round the meatus on both sides, and warm stupes and fomentations again had recourse to. These means afforded him relief in a short time.

Saturday, 7th. Has slept well during the previous night; has had no return of the acute pain, but a dull aching still continues in both ears; he is very deaf to-day, but he is not so sensitive to light; the bellows noise still continues in his ears, and that which was formerly described as the ticking of a watch, he now likens to the clapping of two pieces of iron together. He only hears an ordinary ticking watch when it is pressed against the auricle of the left side, not at all on the right; he does not hear it when applied to the forehead, or held between the teeth, and but very slightly when applied upon the mastoid process. He complains of a return of the weight in his head to-day; sleeps much; bowels free; urine of a dark brown colour, and depositing a pinkish sediment; mouth very sore. Upon the visit at four o'clock in the evening the countenance was found more tranquil than on any previous occasion; the skin cool; pulse 75; functions natural: pressure on the tragus is now borne with impunity. Upon inspection the membrana tympani was found much less red, particularly on the left side; it is also beginning to clear above the malleus; mouth still very sore; ordered a gargle, and to have light broth.

Monday, 9th. Much better in every respect. A slight muco-purulent discharge now appears from the meatus of the right ear. On removing this with a little tepid water from a syringe, and bringing the membrana tympani within the field of the speculum, the redness was found to have greatly disappeared, except on two or three spots, about the size of pin-heads; all the intermediate portions of the membrane had become white, and apparently thick and pulpy. Upon the left side there is a slight moisture from a mucous discharge, which coats over the surface of the membrane of the drum, and the inferior portion of the wall of the canal. Having removed this with a little

cotton on a probe, the vascularity which had previously appeared on those parts was found to have greatly diminished; but the membrane itself had become thickened and opaque; he is quite free from pain; the hearing distance has increased to about two inches on each side; ordered three grains of the hydriodate of potash three times a day, and nutritious diet. On the right side two small glands have now appeared beneath the lobe, and another slightly enlarged over the mastoid process.

Thursday, 12th. Has very much improved in every respect since last report; is now quite free from fever, but is very weak and languid; tongue clean; soreness of mouth quite removed; pulse 60; has some appetite; sat up for a short time yesterday; glands in the neck much lessened, that over the mastoid process still tender; is quite free from pain in the ears, but still complains of a slight, generally-diffused pain in his head; there is no intolerance of light; hearing distance has increased to eighteen inches on each side; has had no discharge from the ear since; the loud ticking noise has quite disappeared; but the buzzing or bellows sound is still slightly perceptible; any surrounding noise is particularly distressing to him; he says he feels as if it struck his ear. Upon examination of the right ear, the passage is found to be quite dry, and of a light pink colour; the membrana tympani generally is somewhat redder than on the occasion of my former visit; and, besides this generally diffused redness, there is a deep-coloured ring of vessels to be seen, forming a crescentic band about a line in breadth, occupying the lower portion of the membrane, the vessels of which can be distinctly seen running in nearly straight lines from the circumference towards the centre, very similar to some of the forms of corneitis. The projection of the hammer-bone is marked by a fasciculus of dark red vessels, running along the course of its attachment. In the left ear the general redness of the passage and the membrane is not so great, and there is no ring of vessels such as exists upon the right side. He states that, on Tuesday, on blowing his nose, he felt as if some-

thing gave way in his right ear, and that immediately his hearing increased, and on repeating the experiment a few times, the same phenomena took place in the left ear. Since then his hearing has gradually improved to the present time; he was ordered to be blistered again behind the ears, to continue the use of the potash, to sit up for a few hours every day, and have nutritious diet. His functions are all natural, and he sleeps tranquilly through the entire night.

Monday, 16th. Has continued to improve; hearing has increased to three feet upon the right, and four feet upon the left side. Upon examination the right membrana tympani is found much less vascular but somewhat more opaque than the left, which is still of a uniform pinkish colour, but has, nevertheless, regained its polish and semi-transparency much more than the other. The buzzing noise is still slightly felt. The blisters were repeated, and the potash, with tincture of iodine continued; slight open air exercise permitted.

Wednesday, 18th. From the general improvement in his health, he was enabled to visit me at my house on this date. He states that he is now quite well, but is still weak; he looks pale and thin; the buzzing, and all other noises, have completely disappeared. The membrana tympani on the right side is found to have lost much of its vascularity, but is uniformly opaque, and is also dull upon its surface; with this ear the hearing distance is now four feet(*a*), whereas with the left, which is still very vascular, but much more transparent, the hearing distance is now full six feet. A generous diet and the potash and iodine ordered to be continued.

Sept. 25. His general health is now quite restored; his hearing as good as ever; the noise has entirely disappeared. During the past month a blush of redness has several times appeared upon the left membrana tympani. Still his hearing

(*a*) The same watch having been used in this and all the other cases in the report, the comparative amount of difference in hearing is correct.

distance with that ear is somewhat greater than on the right side, in which the membrane is not vascular, but slightly opaque. Occasionally leeching, blistering several times, and the use of the iodine and potash internally, have now completely restored him.

The constitutional symptoms in this case were more than usually severe, and such as might lead the practitioner to suppose the brain or its membranes engaged. We also learn from this case that inflammation of the tympanum and its membrane may produce such a degree of deafness as that the watch cannot be heard, even when *applied* to the ear.

In all probability the inflammation commenced and was originally confined to the tympanal membrane, and afterwards extended to the middle, and, possibly, the internal ear.

From the latter stage of this boy's case we also learn a fact worthy of observation, namely, that it is not the amount of vascularity, but the degree of thickening and opacity in the membrana tympani, which produces the deafness.

CASE II.—*Acute Myringitis and Tympanitis of one Side; Immediate Recovery under the Use of Mercury.*

Catherine Lawlor, aged 21, applied at the hospital at ten o'clock on the morning of the 18th of April, for an attack of intense pain in her right ear. She states that she has not been "regular" for the last six weeks; that she was attacked four days ago with catarrh, attended with considerable stuffing in her nose, and the other usual symptoms of that affection; that she had walked along the sea-shore the day before, with a cold wind blowing upon her right side. She went to bed tolerably well last night, but awoke at three o'clock this morning with a violent beating pain in her ear, accompanied by a loud noise, which she likens to the "puffing of a steam-engine;" the pain resembles that of a sharp instrument penetrating through her ear into her head, which she describes as most excruciating. She had also some pain and soreness over that

side of the head; she felt some difficulty of deglutition, owing to the pain it caused her. Coughing, sneezing, or any motion of the temporo-maxillary articulation, greatly aggravated her sufferings, and gave her a feeling of bursting in the middle ear.

She rose at seven o'clock, felt great sickness of stomach, and had a well-marked rigor whilst dressing. She immediately applied to a neighbouring practitioner, who put some drops with a piece of cotton into her ear, which only aggravated her symptoms. These drops appeared to be oil and laudanum. 11 o'clock, A. M. Her pain still continues, and the noise has increased; there is slight redness and great heat of the auricle. The pain is increased on making pressure over the tragus in front of the meatus; on pressing or percussing the mastoid process slight pain is also complained of. The pain in her ear, however, is not increased by these means, nor is it referred to the tympanum. She has no pain beneath the meatus, nor behind the angle of the jaw. The hearing distance, with an ordinary ticking watch, is scarcely three inches in the right ear. On closing the meatus of the left side the noise is greatly increased. On examination with a speculum the auditory canal is found highly vascular, dry, devoid of cerumen, and exceedingly tender to the touch. The membrana tympani has lost its polish, and is of a bright, florid, generally-diffused red colour, spotted with small patches of a deeper hue, like minute ecchymoses. The projection of the malleus can be recognised, of a darker colour than the surrounding parts, with a whitish line in the centre. Below the malleus, and towards the posterior part of the membrane, a well-defined vesicle, about the size of a grain of mustard seed, and filled with a brownish fluid, can be seen. Upon her holding the mouth and nose, and pressing the air into the Eustachian tube, she experiences considerable difficulty in making it pass up upon that side, while it passes with facility into the tympanum of the left. The ear, or a stethoscope held to the right side during this operation, readily perceives

as soon as the air reaches the tympanum, a squeeling and gurgling sound, as if the air passed not only through a narrow passage, but through a fluid like mucus. This pressure of air into the tympanum greatly aggravates her symptoms.

Upon looking into the mouth, the fauces, uvula, and back of the pharynx are found nearly of their natural colour. Upon inserting the forefinger of the right hand into the mouth, and pressing its point upwards, backwards, and outwards, towards the mouth of the Eustachian tube, considerable increase of pain is experienced in the middle ear. The tongue is coated and flabby; the pulse regular; but there is heat of skin, and considerable anxiety of countenance. The left ear is natural in function and appearance. This patient suffered from rheumatism of the upper extremities some time ago.

Four leeches were applied around the meatus, as far in as possible, and four in the depression in front of the tragus. She was ordered to foment and steam the ear over hot water, placed in the bottom of a long, narrow mug, frequently during the day; and a purge was administered.

April 19th. States that she received immediate relief from the leeching. The countenance is less anxious, and she slept well all night; the noise of a steam-engine is altered to a gurgling sound; the pain and all other symptoms are relieved; the membrana tympani, however, remains nearly the same in colour, but the vesicle has become flaccid. She was put on the use of calomel and opium in small doses frequently repeated; a blister was applied over the mastoid process; the fomentation and warm vapour was ordered to be continued, and a linseed-meal poultice to be applied to the external ear at bed time.

April 20th. Continues to improve. Noise changed to that of the ringing of bells; the pain, on pressing the mouth of the Eustachian tube, is much less; the membrana tympani is less vascular; the general symptoms are all improved; the mercury to be continued.

April 21st. All the symptoms relieved; the mouth is slightly sore; no pain on pressing anywhere around the ear or meatus; all heat and vascularity of auricle is removed; the membrana tympani has lost its vascularity, but is slightly more opaque, and whiter than natural; the vesicle has quite disappeared; three or four large vessels can still be seen coursing along the handle of the malleus. Upon forcing air through the Eustachian tube into the tympanum, a slight gurgling noise can be perceived in the middle ear, and of the peculiar sensation which it imparts the patient is quite conscious. During this operation and while the membrane is within the field of the speculum, a slight blush of redness, of a pinkish hue, is observed to be produced in the membrane. The hearing distance is increased to four inches. A copious red deposit was observed in the urine. She has been slightly purged by the mercury; ordered to lessen its dose to one pill night and morning.

April 23rd. Continues to improve in hearing; noise as before; she has had no return of pain in the ear; the pain and soreness in the head gone; no flying pains or other rheumatic affection; the mouth is very sore: ordered to stop the pills, and take the sixteenth of a grain of oxymuriate of mercury with decoction and tincture of bark three times a day; generous diet.

April 25. Continues to improve rapidly; membrana tympani is more transparent than upon last examination. Hearing distance is increased to twelve inches; slight pain is still felt on pressure over the lower portion of the mastoid process, and opposite the point of the styloid process, in which latter place it is still increased on coughing: ordered to continue the oxymuriate and bark, and apply another blister.

May 1st. Ceased attendance at the institution; all her symptoms having now disappeared, with the exception of a slight buzzing occasionally. The hearing, she says, is perfectly restored.

September 1st. I had an opportunity of examining this

young woman again this day; she states that she is perfectly well in every respect, and that her hearing is quite restored; but she says that she occasionally suffers from a slight “ticking noise” in the ear which was affected. Upon examination I found the membrane of the drum upon this side presenting a slightly mottled appearance, particularly towards its lower edge, but without an opacity of any account. Her hearing, she says, is equally perfect on both sides; but upon testing it by the watch, the hearing distance is found to be two feet less upon the right side than upon the other.

CASE III.—*Severe Rheumatic Inflammation of the Membrane and Cavity of the Tympanum, with Periostitis, Polypus, &c.*

Mr. F., aged 49, with light hair and fair complexion, had suffered several years ago from a severe attack of rheumatism, in which his heart was affected, caught while exposed to a cold wind upon the top of a coach during a long journey through England; since that period he has been very liable to catch cold, in the head particularly, when the feet were exposed to damp or a low temperature. These attacks of catarrh were characterized by violent fits of sneezing and running at the nose, &c.; latterly his sense of smelling became greatly impaired, and he perceived a stuffing in the right nostril which rendered him very uncomfortable. During the summer of 1846 he was attacked with cough, expectoration, and other symptoms of bronchitis, in addition to the catarrhal affection. Having recovered from this, he remained in good health till January, 1847, on the 28th of which month, during a period of very wet and severe weather, his present attack commenced. His own words are: “About this period I wore a muffler about my neck; one sharp morning I walked into my office, laid it aside on my arrival, and, being called off suddenly to the Four Courts, I forgot to put it on again. On my way there I felt a blast of sharp, cold air strike my throat on the right side, under the ear, but I

did not pay much attention to it, and remained in Court most of the day, with my hat off occasionally. About 2 o'clock I felt a slight pain in the right ear, and got a bit of cotton-wool put into it; about 6 o'clock I returned home from my office. I called at my apothecary's who dropped some warm oil and laudanum into my ear, which for a time lessened the pain, but did not completely remove it; but I was enabled to resume my business as usual next day."

Mr. Collins, to whom Mr. F. first applied, writes to me as follows: "When Mr. F. first called upon me he complained of pain in his right ear, and also of slight shooting pains about that side of the head; he looked a little dull and heavy, but there was no fever, quickness of pulse, headach, deafness, or other symptoms of importance present. I considered his attack to be of a rheumatic or neuralgic character, particularly as he had suffered a few years before from severe rheumatic fever; and as the pain in the ear was what he most complained of, I dropped some tincture of opium and olive oil into it, and applied a bit of wool to prevent its coming out; I also ordered him an aperient. Upon the next evening Mr. F. again applied to me on his return from Court, and stated that he had derived relief from the drops until he was again exposed to cold and draughts that day: the drops were again applied and with relief. The next day Mr. F. resumed his usual avocations, but the pain continued to increase, and four leeches were applied behind the ear, and a poppy fomentation and a poultice applied with considerable relief, though some slight pain still remained in the ear and the side of the head. His sense of smelling now returned and continued perfect for a few days, when it was again lost. Mr. F. confined himself to the house for the next two or three days, but would not consent to do so longer, as he felt much relieved of the pain, and business of great importance required his attention at his office. In a few days from this date his former symptoms returned, to relieve

which he was strongly recommended by a non-medical friend to drop into the ear a liniment of oil of turpentine and oil of cinnamon, which I prepared for him, but, having experienced no benefit from this, he applied to you."

I first saw this gentleman upon the 13th February; he complained of acute pain in his right ear, which, as appears from the foregoing account, had continued off and on during the previous fortnight. The pain he described as "shooting from the ear to the temple and top of the head, accompanied with a boiling and pumping noise, like that of a steam-engine;" the pain also appeared, according to his own description, to reach to the throat, without making the throat sore; it was increased by sneezing, but relieved by pressing the hand upon the ear and side of the head. Upon inspection, the auricle was found hot and somewhat swollen; the lining of the meatus and auditory canal was red, tumid, and completely devoid of cerumen; the introduction of the speculum, and the examination, caused a good deal of pain from the tenderness of the parts; the membrana tympani was of a dark, brown, red colour, had lost its polish, and appeared to be swollen and pressed outwards: the projection of the malleus could not be discerned in front of the ear; pressure in front of the ear gave a good deal of pain, but there was no tenderness over the mastoid process. Rest, abstinence, confinement to the house, constant fomentations, leeches round the meatus; with small doses of blue pill, James's Powder, and hyosciamus, at night, and an aperient in the morning, was the treatment resorted to during the next few days.

Upon the 19th, his symptoms, with the exception of the pain in the ear, continued much the same; he had also flying pains of a rheumatic character in the side of the head, the wrists, feet, and generally throughout the body. The pumping and boiling noise remained unabated: the deafness now became complete upon that side. The appearance of the ear

continuing unchanged, except that the meatus was more swollen, it was deemed advisable to place him under the influence of mercury,—an opinion in which Dr. Stokes, who saw him with me, at that time concurred. He was accordingly, but with some difficulty, mercurialized by means of small and frequently repeated doses of blue pill, calomel, and opium. When his mouth became sore, the pain in the ear and the noise lessened somewhat, and the general rheumatic affection disappeared; but the meatus and auditory canal now became so much decreased in caliber, owing to the thickening of the lining of these parts, that it was not possible to gain more than a glimpse of the red and swollen membrana tympani. The leeching and blistering were continued, and the surfaces denuded by the latter were dressed with extract of belladonna and mercurial ointment.

March 10th.—The cuticle became detached, and a slight muco-purulent discharge took place from the external meatus; the ear was then syringed with plain tepid water; he was allowed a more generous diet, and placed upon the use of the hydriodate of potash, with infusion of bark and tincture of orange peel. His general health was now improved; he slept better, and was able to go abroad and take exercise; the discharge, however, continued to increase, and emitted a very offensive odour; and, at the same time, he began to complain of a deep-seated soreness all over the side of the head, behind the ear, but particularly over the mastoid process and immediately below it. Towards the end of March, upon examining the ear carefully under a good light, a small poly-poid excrescence of a light red colour, growing from the posterior wall of the canal, and completely filling up that cavity, was detected; this I removed with the wire snare, and the discharge then lessened; the soreness of the side of the head, the pumping, and the deafness, however, remained the same. Pressure over the mastoid process, and the post-

aural region of the head, very much increased the soreness, and it was now evident that the periosteum covering these parts was inflamed. During the latter part of the month of April, and all the month of May, the symptoms of periostitis remained much the same, and the scalp itself became inflamed, having a dusky, red hue, pitting on pressure, and feeling excessively sore to the touch. The treatment consisted in the frequent abstraction of blood from the affected part by means of a few leeches, and a small cupping-glass applied over the leech-bites; poulticing, inunction with different ointments, both of a sedative and absorbent nature, slight vesicants, &c., and change of air. Bark, potash, and iodine, were also recommended to improve the general state of the constitution. He had no headach, rigors, or perspirations, and his sleep and appetite were tolerably good; still, however, the pain continued, and the dusky redness and tumefaction of the scalp remained, although there was no evidence of suppuration. It was determined, in consultation with Mr. Cusack, to make an incision down to the bone, and thus free the periosteum, and give exit to any matter which might be contained beneath it. Accordingly, upon the 29th of May I made a perpendicular incision, about two inches long, nearly parallel with the posterior margin of the auricle, by inserting a sharp-pointed scalpel down to the bone at the point of insertion of the mastoid muscle, and carrying it upwards and a little backwards. The bone did not feel rough or gritty under the knife. A pledget of lint was inserted into it; and when the hæmorrhage had ceased, a linseed-meal poultice was applied over it.

The wound suppurated kindly, and all the surrounding soreness of the scalp and pain on pressure soon disappeared. As the discharge from the wound increased that from the meatus lessened, and in about ten days the wound itself healed without any exfoliation of bone. The pumping noise now ceased altogether, the discharge from the ear also lessened very

much, and all uneasiness in the parts ceased. During the month of July, and till the 12th of August, I only saw Mr. F. occasionally. Upon examining the ear carefully at this latter date, I perceived that the meatus had regained its natural size, and I discovered another second small polypus in the situation of the first; this I also removed, and Mr. F. came to me in a day or two to inform me that the discharge had now ceased altogether, and that the hearing had returned the night after I had extracted the polypus. He could now perceive the ticking of a watch at the distance of an inch from his ear, although he was quite unconscious of it when pressed against the auricle the day I last saw him. I could now distinguish the membrana tympani perfectly; it was of a dull white colour, evidently much thickened, but not perforated in any part.

September 3rd. He has continued to improve in every respect; his health and spirits are quite restored; all discharge from the ear has ceased; the tinnitus aurium now consists in a slight "booing" which appears occasionally: the hearing is slowly returning. The snuffing and loss of smell I now found to be caused in a great measure by a small gelatinous polypus which filled up the cavity of the right anterior nares, which upon being removed greatly assisted to restore both the nasal respiration and the sense of smell.

This case is instructive, as shewing the rheumatic character of some of the inflammations of the ear, and as exhibiting the occasional failure of the mercurial treatment to cut short the disease, particularly if it has advanced to any height, as this had. The discharge came from the external ear and the polypus. This morbid polypoid growth, thus appearing during the progress of an inflammation, should always lead the practitioner to suspect mischief going on in the neighbourhood, and should cause him to examine with great care the condition of the mastoid process and its coverings, although neither the existence of a polypus, nor the fœtor or dark colour of the dis-

charge, are of themselves a sufficient proof of caries or denuded bone. The appearance of periostitis, even at this late period, is not an unusual consequence of violent otitis; the inflammation may spread from the periosteum lining the bony portion of the meatus; or the mastoid cells may, and often are, the seat of inflammation, and this inflammation may extend from the layer of bone which covers them to the periosteum. If not relieved by such local and general means as were made use of in the early part of the foregoing case, the surgeon should not hesitate to cut down upon the covering of the bone, and divide it fairly for an inch or more of its length. Almost immediate ease follows this operation, even though we fail to discover the existence of pus; and, moreover, delay after a certain period may prove fatal. A thin shell of bone is occasionally thrown off in such cases, but not always. Generally speaking, the otorrhœa lessens when the discharge from the wound is fully established, although there may not be any communication whatever between the parts from which these discharges come. I had occasion to resort to this operation five times during the past year: in two cases it was followed by the exfoliation of a thin shell of bone; in all, hearing was restored either partially or completely. Performed in the situation and in the manner described in the foregoing case, the hæmorrhage which follows is generally very trifling. It is necessary to keep a tent in the wound till suppuration is established. When this pain over the mastoid process appears early in the disease, and is accompanied by an erysipelatous redness and œdema of the scalp, we should not hesitate in having recourse to incision immediately.

We have in this case another remarkable example of a mechanical impediment, such as the polypus, so completely obstructing sound that a watch held to the ear was not perceived, although hearing returned within a few hours when that mechanical obstruction was removed. There can be little doubt of the middle ear having been engaged in this inflam-

mation, yet we have no evidence of perforation of the membrane of the drum having taken place. The only treatment at present employed with Mr. F. is that of occasionally washing over the auditory canal and membrana tympani with the ten-grain solution of nitrate of silver(*a*).

September 10th.—His hearing had increased to the distance of ten inches on the affected side. It continues to improve.

(*a*) It was with considerable surprise I read an article by Dr. Bonnafont in the *Gazette des Hôpitaux*, for November last, recommending a *powder of nitrate of silver to be blown into the ear*, for the cure of ulcerations attending otorrhœa. With still greater wonder and regret have I seen such a practice quoted and recommended in British journals. A more empirical practice, except that of a farrier blowing powdered white sugar and quicklime into the eye of a horse, to cure it of the “Haws,” I never knew advocated. With as much reason should powdered caustics be blown up the vagina, or the rectum, or into the throat or nose, or into the eye, to cure a spot of ulceration on these parts, as into the ear; and with as much ease, certainty, and security can an ulcer in the auditory passage, or on the membrana tympani, be touched with a caustic, either in substance or solution, without injuring the adjoining surfaces, as into any of these cavities. See the London and Edinburgh Monthly Journal; and Ranking’s Half Yearly Abstract for July, 1847.

So long as practices, such as that recommended by Dr. Bonnafont, are quoted by our English journals, so long shall the treatment of diseases of the ear be considered an “opprobrium” to medicine. Mr. Ancell’s Report on the Progress of Aural Surgery, which appeared in Dr. Ranking’s last Abstract, shall be again referred to in the continuation of this communication.

In the present state of aural surgery the record of well-observed cases would greatly assist the progress of this department of medical science.

(*To be continued.*)

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

A Treatise on the Structure, Diseases, and Injuries of the Blood Vessels, with statistical Deductions: being the Essay to which the Jacksonian Prize, for the year 1844, was awarded by the Royal College of Surgeons of England. With numerous Additions. By EDWARD CRISP, M. R. C. S. London, Churchill. 8vo. pp. 354.

AT all times the importance of diseases and injuries of the blood-vessels has been acknowledged: and, notwithstanding the admirable works of Scarpa, Hodgson, and others, the subject has not lost any of its interest; the investigation of it still continues; facts of the greatest importance are daily being made known, and the modern improvements in the treatment of aneurisms continue to attract the deepest attention of the surgeons of the present day.

The work commences with a chapter on the structure of arteries and veins. The author recognises the existence of four coats in an artery: first, the internal, or serous; secondly, the subserous, or tunica cellulosa of Haller, or sclerous of Malgaigne; thirdly, the fibrous; and, fourthly, the cellular. He states that he has "frequently seen the lining membrane of a bright yellow colour in jaundiced subjects," but in animals which he fed on madder "its colour remained unaltered."—p. 2. The second, or subserous tunic, he states, is of a whitish colour; that it varies in thickness according to the age of the individual; that it is much less distinct in the young than in the middle-aged, and more dense in the apoplectic and those affected with hypertrophy of the left ventricle; that its fibres pass in an oblique or longitudinal direction, and may be distinctly recognized on the arch and ascending portion of the aorta; and he believes that the adventitious deposits are seated

principally, if not invariably, in this tunic. With regard to the third, or fibrous coat, the author observes:

“I have never detected any deposits in it; and although in many dried specimens, where the arteries are converted into bony cylinders, the ossified matter appears to be seated in this tunic, I believe a careful inspection will shew that the deposits are really in the subserous membrane.”—p. 3.

In speaking of the “morbid conditions of arteries,” he inquires:

“How are the different forms of *redness* to be distinguished? It appears to me that the matter may be materially simplified by dividing these discolourations into the *inflammatory*, the *congestive*, and what has been called redness from *imbibition*. The first is characterized by appearances hereafter to be described, and, I believe, when these are present, we may rightly infer the existence of inflammation. The congestive discolouration is, in many instances, difficult to distinguish from the inflammatory; but the state of the blood, as well as the turgid condition of other parts, especially the membranous tissues, will greatly assist us in coming to a right conclusion. Thus in cases where the blood is found fluid after death, or where it is deficient in fibrine, and its colouring matter, perhaps, altered, these congestions are not unfrequent.”—p. 8.

The author, however, admits that “the boundary between inflammation and congestion remains undefined, and that, as our knowledge of the essential characteristics of the former are doubtful, we can scarcely hope that the conflicting opinions which are at present entertained can be reconciled.”—p. 9. With regard to the redness from imbibition, he observes:

“I believe the best distinguishing mark between this and the foregoing discolourations is the absence of the *soft, pulpy state of the inner coats*, as well as the facility with which redness is removed by immersion in water.”—p. 10.

Further on, the author devotes part of his work to the subject of “Arteritis,” and divides this disease into the acute and chronic forms, “the former being of less frequent occurrence than the latter.” Speaking of inflammation of the aorta, he remarks:

“The signs attending inflammation of the aorta are very obscure, and the diagnosis, consequently, extremely difficult. When the commencement of the thoracic aorta is affected, the symptoms usually described are, increased and inordinate pulsation of the heart and aorta, great anxiety of countenance, a feeling of suffocation,

dyspnœa, orthopnœa, and pains of a burning or tearing character, often accompanied by a sense of impending dissolution.”—p. 24.

These, however, are by no means distinctive characters of the disease, and we are quite of the author's opinion, “that the disease is at present involved in so much obscurity, that in the majority of cases there are no indications of its existence.” M. Bizot mentions three cases which he witnessed:

“In all there was an œdematous state of the trunk, arms, and face, attended with febrile excitement, but with no irregularity ‘of pulse;’ the thoracic and abdominal aorta (especially the former) were red, and covered with a soft, thin, yellowish layer of albuminous exudation, easily detached, and giving a rough aspect of the inner membrane.”

Mr. Crisp relates the particulars of the *post mortem* examination of a patient under his own care, who laboured under pneumonia and bronchitis, together with a granular state of the kidneys:

“A few minute specks of atheromatous deposits were found in the thoracic and abdominal aorta. The inner coat was much reddened, swollen, and easily detached; the redness not removed by washing; the cellular covering also was much injected,” &c.—p. 25.

The author has taken considerable pains with that portion of the work which he has devoted to the subject of arteritis in the extremities. The connexion between arteritis and dry gangrene was originally pointed out by Dupuytren, and the laborious researches of Mr. Crisp have added much valuable information to what has been already known upon this subject. He has related the particulars of eleven cases of arteritis, followed by dry gangrene. Some of these were cases of spontaneous dry gangrene; two were the result of injury, and one from the application of a ligature to the femoral artery for popliteal aneurism. In almost all of them the principal arteries were filled with a firm coagulum, adherent to the lining membrane, which latter, in many instances, presented an intensely red appearance. Under the head of “Arterial Deposits,” the author dwells upon the several forms, namely, the *atheromatous*, *semi-cartilaginous*, *cartilaginous*, *calcareous*, and *bony*, and remarks:

“They generally take place in patches, varying in size, form, consistence, and elevation, and are always, I believe, situated in the subserous coat, the inner membrane, in many specimens, being easily removed. I have never found these deposits in the fibrous layer, although in dry specimens they appear to occupy this part.”—p. 67.

In speaking of the diseases of the cerebral arteries, he remarks :

“ The cerebral arteries are frequently thickened, and sometimes entirely obstructed, by atheromatous and cartilaginous deposits. These are more commonly found in persons of advanced age; but I have met with them in individuals under forty. The deposit is generally of a yellowish colour, of a cartilaginous consistence, and is situated under the serous coat. In three instances, in which I have placed this adventitious substance under the microscope, no fatty matter or oil globules were present. This deposit frequently diminishes the caliber of the artery so much as to interfere materially with the circulation of the blood. *I have never seen the cerebral arteries, like those of the extremities, converted into bone*; and I apprehend that this alteration is of rare occurrence, although the term “ossified” is constantly used. In one example the patient was ninety-five years of age. The arteries were described in the museum catalogue as bony; but on cutting into the deposit no ossific matter was discovered.”—p. 74.

Mr. Crisp evidently considers this alteration, usually designated an “*ossification*” of the arteries of the cerebrum, as very problematical. Mr. Robert W. Smith, the conservator of the Richmond Hospital Museum, has recently favoured us with an inspection of two preparations of diseased deposits in the cerebral arteries: in one, the atheromatous deposit prevails; but in several spots there are distinct patches of “ossific” matter; and in the second preparation almost all the arteries of the brain have undergone the “ossific” degeneration. We recollect having seen, about three years ago, a precisely similar instance in the brain of a patient who died at the age of about 30.

The author devotes but a small part of his essay to the “Diseases of the Aortic Valves.” He has observed the following: 1, acute inflammation; 2, thickening and inflammatory adhesion; 3, cartilaginous, atheromatous, calcareous, and bony deposits, commencing in the fibrous tissue, and generally more abundant at the bases and free margins of the valves, and varying much in size; 4, vegetations; 5, retroversion and inversion of the borders; 6, enlargements and universal dilations; 7, ruptures; 8, aneurismal or partial dilatation. In speaking of the symptoms and diagnosis of disease of the aortic valves, he says:

“ The function of the valves being frequently so much altered as to allow of *regurgitation of this fluid*. In other examples the aortic orifice is so obstructed as scarcely to admit of the passage of one-sixth of the usual quantity of blood.”—p. 80.

We are rather surprised to find that the author has made no reference to an excellent paper upon this subject, by Dr. Corrigan, in the thirty-seventh volume of the Edinburgh Medical and Surgical Journal. To the disease of the aortic valves admitting of regurgitation of the blood into the left ventricle, Dr. Corrigan has given the name of "*permanent patency*." He describes four cases of this regurgitation: 1, where the aortic valves have been absorbed in patches, so as to present a reticulated appearance; 2, where one or more of the valves may have been ruptured; 3, where, from disease, the edges of the valves may be turned out towards the sides of the aorta, so that they cannot spread across its mouth; and 4, where the valves, without any proper lesion, may be rendered inadequate to their function by dilatation of the mouth of the aorta. Mr. Crisp has overlooked a very remarkable sign of this affection which Dr. Corrigan particularly dwells on, and thus described:

"When a patient affected by the disease is stripped, the arterial trunks of the head, neck, and superior extremities immediately catch the eye by their singular pulsation: at each diastole, the subclavian, carotid, temporal, brachial, and in some cases even the palmar arteries, are suddenly thrown from their bed, bounding under the skin. From its singular and striking appearance the name of *visible pulsation* is given to this beating of the arteries."(a)

We pass on to that portion of Mr. Crisp's work devoted to the subject of aneurisms. He objects to the nomenclature at present employed in this disease, and observes:

"If the term *endogenous* were substituted for that of *spontaneous* when speaking of aneurisms which arise from lesions of the inner coats, and the term *exogenous* or traumatic applied to those which are produced by external division of the arterial walls, I think the nomenclature would be more appropriate."—p. 110.

We confess we are somewhat at a loss to understand what analogy there exists between an "exogenous aneurism" and an "exogenous plant;" the term from usage has become botanical, and when we employ it in reference to a plant, we mean one that increases in its circumference by means of additions made *externally* to the part already formed. The comparison between the injured artery and the growing plant is thus liable to produce confusion: there are "*laminæ*" deposited in both; in the aneurism, the deposit of the layers is from within, thus all aneurisms may be said to be "*endogenous*;" whilst in *exogenous* plants the deposit is from without, the last layer laid down being the

(a) Edinburgh Med. and Surg. Jour., vol. xxxvii p. 226.

most external of all, which cannot be the case in aneurismal tumours.

The author has exhibited an immense amount of labour and research in arranging a table of 551 spontaneous aneurisms, selected indiscriminately from the British Medical and Surgical Journals, from the year 1785 to the present time. The following is the summary of the cases:

Situation.	No. of Cases.	Age.	No. of Cases.
Thoracic aorta,	175	Under 10 years of age, . .	1
Pulmonary,	2	Between 10 and 20 . . .	5
Abdominal aorta and its		„ 20 and 30 . . .	71
branches,	59	„ 30 and 40 . . .	198
Common iliac,	2	„ 40 and 50 . . .	129
External iliac,	9	„ 50 and 60 . . .	65
Gluteal,	2	„ 60 and 70 . . .	25
Femoral,	66	„ 70 and 80 . . .	8
Popliteal,	137	„ 80 and 90 . . .	2
Posterior tibial,	2	„ 90 and 100 . . .	1
Innominate,	20	Age not stated,	46
Carotid,	25		
Cerebral,	7	Total, . . .	551
Temporal,	1		
Ophthalmic,	1		
Subclavian,	23		
Axillary,	18		
Subscapular,	1		
Brachial,	1		
Total, . . .	551		

“ I have examined 364 preparations of aneurism in the London museums, and the numbers are as follows:—

Situation.	No. of Cases.	Situation.	No. of Cases.
Thoracic aorta,	207	Axillary,	8
Abdominal aorta,	42	Carotid,	9
Internal iliac,	1	Mesenteric,	2
Common iliac,	2	Splenic,	2
External iliac,	7	Cerebral,	1
Femoral,	12	Vertebral,	1
Popliteal,	50	Radial,	1
Posterior tibial,	2	Pulmonary,	2
Innominate,	3		
Subclavian,	12	Total, . . .	364

“ No useful deduction can be drawn from the above, as to the

comparative frequency of aneurism, as the greater number of external aneurisms are cured by operation.”—p. 113.

The author adverts to the several causes of aneurismal tumours, and dwells at length upon the disease as developed in the individual arteries of the human body. In speaking of the *treatment* of aneurisms, the author remarks concerning pressure as a means of cure:

“This mode of treatment is now becoming so frequent in aneurisms of the femoral artery, and the cases in which it has been recently employed have been so successful, that there is great probability that the use of the ligature in the cure of popliteal and femoral aneurisms will hereafter be seldom resorted to.”—p. 177.

Again:

“Mr. Syme, of Edinburgh, has been one of the most strenuous of the modern objectors to this mode of treatment; but I think the evidence in favour of the plan is now so abundant and satisfactory, that Mr. Syme will be induced to change his opinion.”—p. 184.

We fully concur in these observations, and are equally sanguine in our hopes as to the change in Mr. Syme’s views. On the present occasion we do not mean to offer any further remarks on Mr. Crisp’s book; but in concluding this brief notice we would say, that we fear we have not been able to do justice to its contents: it abounds in sound practical knowledge, and gives evidence of immense labour, and most patient research; and, were it only for the sake of the interesting cases which are embodied in its pages, the book would be well worth the attentive perusal of the practitioner.

On Pulmonary Consumption and on Bronchial and Laryngeal Disease, with Remarks on the Places of Residence chiefly resorted to by the consumptive Invalid. By Sir CHARLES SCUDAMORE, M. D., F. R. S., of the Royal College of Physicians of London, Honorary Member of Trinity College, Dublin, &c., &c. 8vo. London, Churchill. 1847. pp. 259.

WE chanced a short time since to have occasion to refer to the seventh volume of the London Medical Gazette, published in 1830-31, when our attention was attracted by a critical notice of a work from the pen of Sir Charles Scudamore, on the “Efficacy of the Inhalation of certain Medicines in Pulmonary Consumptions,” which work was written with the manifest intention of diverting some of the golden shower, at that time

falling on the notorious quack St. John Long, upon his own person. The reviewer, in taking the author to task with no sparing hand, amongst other points, notices the singular assumption of the title,—*Honorary Member of Trinity College, Dublin*. In a reply to this review, published in the same volume of the Gazette, Sir Charles Scudamore apologises for having used it instead of the title “Honorary Doctor of Medicine of Trinity College,” which degree he really does possess. Notwithstanding this apology; we find the honorable (not honorary) knight, with the true spirit of quackery, again assuming, in this, the latest offspring of his pen, the very same designation which he admitted seventeen years ago he had no claim to. The author’s reasons for thus decking himself out in false colours we cannot divine; but, as our Journal is printed within the walls of Trinity College, Dublin, we feel bound to expose any attempted imposition on the public in connexion with that institution.

The book now before us is a *réchauffé* of that published in 1830, which we have above referred to, some seasoning being added to give it the appearance of a new book, and to recall the attention of the public—not the profession—to Sir Charles Scudamore. The new seasoning consists of “the results of the author’s further inquiries into the physiology and pathology of the several diseases of which he treats, and with them his enlarged experience of the general principles of practice.”

Although in the title of the book nothing is said about the mode of treating pulmonary consumption by the inhalation of iodine vapour, no less than one hundred pages are taken up with the minute details of cases thus treated. We must, therefore, look upon this as the theme of the present publication, and for a few moments beg our readers’ attention to the author’s account of the success which he vaunts to have obtained from this remedy. We let Sir Charles speak for himself:

“Having brought to a conclusion all the evidence which I intend to offer in favour of inhalation, it remains for me to express my sentiments and convictions still more distinctly than I have yet done, regarding the value of the particular inhalation of iodine and conium, as a remedy in tubercular phthisis.

“From the favourable list of cases which I have given, it may, doubtless, be inferred, that I entertain great confidence of being able to cure consumption. I may, perhaps, be accused of shewing too much of one side of the picture, and painting that in too flattering colours.

“I can conscientiously declare, that I have not been guilty of *the least exaggeration* in any part of my narrative of cases. * * * The instances of success, as compared with those of failure in my practice in consumption, have been, I confess with regret, compara-

tively very few; but one explanation of this painful truth is, that I have, for the most part, been consulted so late in the disease as not to have a reasonable chance afforded me of effecting more than a mitigation of the symptoms. Such cases have been of consumption so confirmed as truly to come under the forcible description given by Sir James Clark, at page 88, of the absolute impossibility of cure, and had been given up by others as lost.”—p. 210.

The narrated cases from which these conclusions are drawn are thirty-eight in number: of these, twenty are placed under the head of phthisis, of which fourteen are reported as cured; five relieved, though eventually terminating fatally; and seemingly but one died without relief: five are cases of laryngitis, of which four were cured, and one proved fatal, though much relieved; ten cases of bronchitis, all cured; and three cases of ague, all cured. And yet with such favourable, or rather such wonderful results,—for Sir Charles was, “for the most part, consulted in cases which had been given up by others as *lost*,”—he looks upon “his instances of success as comparatively few.”

Why, then, do we doubt that advantage is to be derived from the inhalation of iodine vapour in phthisis (the addition of conium we look upon as nought, for our author uses a tincture prepared from the *dried* leaves)? For the following reasons:—In the first place, were we disposed to look on the cases themselves as being trustworthy, we should be compelled to doubt the author’s powers of diagnosis. As evidence of a “very decided case of tubercular phthisis,” he gives the following physical signs:

“The stethoscope afforded signs of pectoriloquism to a small extent at the humoral extremity of the right clavicle, and the sound was dull all around this part of the chest.”—p. 125.

In another case:

“The following indications appeared from the stethoscope and percussion: the voice was brought distinctly under the tube at the apex of the right lung, and there was obscure *gargouillement* at that part.”—p. 134.

Again:

“The left lung gave strong *puerperal* resonance; the right lung was pectoriloquous, from the root to the mamma; there was much gurgling, and percussion was dull over the greater part of the right side; it was also much smaller than the left, and hollow at the clavicle.”—p. 140.

This report is stated to be taken from the written statement of a Mr. King, who attended the case with the author.

That Sir Charles Scudamore did, in general, hear some extraordinary sounds, and often find it difficult to hear the vesicular respiration, we do not in the least wonder; for he states in a note that "he finds it advantageous, when using immediate auscultation, to interpose between the ear and the chest a sheet of letter-paper. It seems to render the vesicular respiration more distinct; and it is a neat method!"

Secondly, the cases have too much the smack of quackery for us to pin our faith on their truth. Many of them are without date (Cases 1, 11, 12, 13, 15, 19, 21, 22, 23, 24, 26, 27, 28, 30, 31, 32, 33, 34, 35, 36, and 37); where the name of another physician, who had seen the case in consultation, is mentioned, he fortunately happens to be dead (Cases 3, 4, and 6); in fine, the headings of the cases,—a few samples of which we subjoin as curiosities of medical literature,—are worthy of the pen of Professor Holloway:

"Case 3.—Tubercular phthisis pulmonalis, pectoriloquism. A very decided case of consumption. The iodine inhalation successfully employed.

"Case 5.—Phthisis pulmonalis; tubercles in each lung; great probability of an ulcer at the apex of the right lung; hectic fever present; the iodine inhalation highly beneficial; the tubercular irritation removed; and the patient restored to health.

"Case 7.—Well-marked case of tubercular phthisis successfully treated, and the recovery permanent.

"Case 17.—Urgent symptoms of tubercular phthisis twice occurring, with an interval of three years. On the last occasion strong evidence of a small cavity. The disease successfully treated."

And so on we might quote, *usque ad nauseam*.

In conclusion, we have only to add, that many years since, shortly after the publication of Sir Charles Scudamore's first book on the subject, we tried the effects of inhalation as he directed in the treatment of several cases, both of phthisis and of chronic bronchitis; we have also then and since seen it employed in the practice of others; and in our experience, so far from being serviceable to the patients with whom it was used, it almost invariably proved highly injurious, giving rise to repeated attacks of local inflammation, and, by the irritation which it produced, evidently hastening the fatal termination of the disease.

For an ingenious method of employing iodine, chlorine, &c., in the form of vapour, we may, however, refer our readers to Dr. Corrigan's paper on "The Exhibition of Remedies in the Form of Vapour in Pulmonary Diseases," published in the fifteenth volume of our former Series.

A Treatise on the Diseases of the Air Passages, comprising an Inquiry into the History, Pathology, Causes, and Treatment of those Affections of the Throat, called Bronchitis, Chronic Laryngitis, Clergyman's Sore Throat, &c. By HORACE GREEN, A. M., M. D., &c. &c. Royal 8vo. New York and London, Wiley and Putnam. 1846. pp. 276.

IN the year 1840, Dr. Green brought before the New York Medical and Surgical Society his method of treating certain diseases of the larynx by the direct application of caustic solutions. The subject not having excited much attention amongst the members, the author refrained from again referring to it; but after a few years some of the members of the Society,—having themselves employed the plan with success,—obtained the appointment of a committee to inquire “into the practicability of making these topical applications to the surfaces of the larynx.” This committee reported in favour of the entire practicability of the operation: but Dr. Green perceiving that much scepticism existed with regard to his statement; and also that many members of the profession were of opinion that it was altogether impossible to introduce matters within the glottis as he proposed, published the Treatise now before us,—both in vindication of his own views, and to call the attention of the profession to that affection of the throat and air passages which he terms “follicular inflammation,” and the efficacy of the plan of treatment he proposes for its cure.

“The well-known fact,” says he, “of the great irritation produced upon an individual by the accidental introduction of a morsel of food, or a drop of tea, or of any other fluid, below the epiglottis, is always adduced as an unanswerable argument against the practicability of introducing strong medicinal agents into the laryngeal cavity. But this plan of reasoning from analogy, is one not applicable in this case; for it is a singular but most interesting fact,—one that has been fully established by repeated experiments,—that the introduction into the glottis of a sponge saturated with a solution of crystals of the nitrate of silver, of the strength of forty, fifty, or of even sixty grains of the salt to the ounce of water, does not produce, ordinarily, as much disturbance as the accidental imbibition into this cavity of a few drops of tea, or even of pure water.”—p. viii.

The author having in the first chapter given a minute and accurate description of the anatomy of the throat, larynx, trachea, and bronchial tubes, proceeds in the second to the consideration of the glandular follicles which are situated in the

mucous membrane lining these passages. The peculiar characters of the different varieties met with, as observed by Lieberkuhn, Böehm, and Henle, are concisely related, their distribution pointed out, and the inferences deduced from their physiological use examined. These points form a natural introduction to the more immediate subject of the Treatise, inasmuch as Dr. Green believes that an abnormal condition of these follicles constitutes "a distinct species of disease, which hitherto has been confounded by writers and medical practitioners with other disorders of these parts, under the names of bronchitis, chronic laryngitis, &c." And it is to this disease, and its treatment, that the author devotes the pages of his book.

That peculiar form of sore throat to which public speakers are especially liable, and which, in this country, we ordinarily term relaxed sore throat, but which in America is variously, and, it would seem, indiscriminately, called "bronchitis," "chronic laryngitis," "clergyman's sore throat," &c., consists, in Dr. Green's opinion, *primarily and essentially in a diseased condition of the glandular follicles of the mucous membrane of the throat, larynx, and trachea.* This disease he looks upon as being, in the first instance, inflammatory; but as liable to terminate in *ulceration, hypertrophy, induration, or in a deposition of tuberculous matter in the follicles themselves.* The affection, moreover, he states, may be confined to the mucous glandulæ of the fauces and pharyngo-laryngeal membrane, or be complicated with diseases of the tonsils, uvula, or air-passages. It is wrong, however, to suppose that this affection is peculiar to public speakers, for of nearly four hundred cases which have fallen under our author's observation, "only about seventy-eight, or one in five of this number, were in any way public speakers."

The general symptoms of the disease are sufficiently well known, and are, in our own experience, common to most disorders of the throat and fauces: consisting, as described by the author, of an uneasy sensation in the upper part of the throat, a frequent inclination to swallow, repeated attempts to clear the throat, and an alteration in the quality or *timbre* of the voice,—caused by a loss of power in the vocal organs, and hoarseness. In the cases which we have seen, however, there has been a symptom invariably present previously to any of these, and which seems to have escaped the attention of Dr. Green, viz., a constant sensation of *dryness* in the throat, as if it were not lubricated by the natural secretions, and which patients complain that they cannot remove by drinking. This stage of the disease may last for years, the symptoms dis-

appearing almost entirely at times, but being always aggravated by vicissitudes of temperature, and by increased exercise of the vocal organs:

“If we inspect the throat and fauces during the progress of the above symptoms, we shall find the epithelium, which, in the healthy state of the mucous tissue, covers its surface more or less, destroyed, its absence being manifested by the slightly raw or granulated appearance which the membrane presents; the mucous follicles will be found hypertrophied, and will appear distinctly visible, especially those studding the upper and posterior part of the pharyngeal membrane. If the disease has been long continued, a portion of the follicles may be found indurated, or, in some instances, filled with a yellowish substance, having a resemblance to, and presenting the physical characters of, tuberculous matter; whilst striæ of opaque, adhesive mucus, or of a muco-purulent secretion, may be seen hanging from the veil of the palate, or coating the posterior wall of the pharynx. As the disease advances, and the follicles situated at the root of the epiglottis and in front of the arytenoid cartilage, and the still more numerous glandulæ of the laryngeal mucous membrane, become involved in the morbid action, all the above symptoms appear greatly aggravated; the hoarseness is much increased, and is constant; speaking or reading aloud is attended with great difficulty, and, when continued for any period, is followed by pain and increased soreness in the region of the larynx, and by a sensation of extreme languor not only about the vocal organs but throughout the whole system. In some cases, where the disease affects the glands situated in the ventricles of the larynx, and near the vocal chords, the voice becomes completely extinguished; or if, by great effort, the patient essays to speak aloud, the vocal resonance is uneven, harsh, and discordant.”—pp. 51, 52.

The author illustrates the appearances of the different stages of the disease by means of coloured drawings, made from cases under his care, and the details of which are given in the present volume; and, allowing for a little exaggeration in the colouring, they seem to be faithful representations of this peculiar disease of the throat and pharynx.

In speaking of the *pathology* of this affection, the author admits that follicular disease occurs more frequently in the intestinal mucous membrane; differing, however, from the generally received opinion, that the presence of disease in the glandulæ of the respiratory system is of rare occurrence, and asserting, that when it does occur there it is generally overlooked or attributed to other lesions. The cause assigned by Dr. Stokes for the increased frequency of disease in the gastro-intestinal mucous glandulæ,—their greater exposure to chemical and mechanical stimuli,—he endeavours to disprove by a refe-

rence to their anatomical structure; the follicles of the stomach and duodenum being situated in the submucous tissue, and numbers of them having their ducts united in one common excretory tube, which, except during the period of digestion, remains constantly closed; and the glands of Peyer (which of the intestinal follicles are the most frequently diseased) being close sacs. The validity of this reasoning we cannot at all admit, for the truth of Dr. Stokes' observation, that the intestinal mucous follicles are more exposed to chemical and mechanical irritation, and the fact of their being more frequently diseased, being both unquestionable, we cannot see the force of any argument derived from their anatomical structure. Moreover, if we investigate the appearance of intestinal follicular ulcers, we shall find that they are invariably cup-shaped,—proving that the disease had commenced in that portion of the glandulæ which is in most immediate contact with the intestinal mucous membrane, or rather passes from the mucous membrane to the follicles. Another argument in support of Dr. Stokes's statement may be derived from a reference to the affections in which the follicles of the intestines are found to be most frequently diseased,—tubercular phthisis, chronic diarrhœa, and dysentery,—in all of which the intestinal mucous membrane is especially exposed to the irritation of both chemical and mechanical stimuli. Dr. Green's observation as to the infrequency of follicular disease in the œsophagus, which is exposed to the same exciting cause, is, we think, of no avail; for any substance, except it be of a highly corrosive or irritating character, can have but little action on the œsophageal mucous membrane, in consequence of the short time it is in contact with it.

Amongst the most important of the predisposing causes of follicular disease of the air passages, our author places *hereditary tendency*, and quotes numerous cases from his own practice in proof of the fact. That the disease is hereditary we do not for a moment mean to dispute; but that it is so is, we think, rather dependent on the occurrence of the affection chiefly in scrofulous habits, or in individuals who do not enjoy a fair share of “fresh air and of the sun's rays,”—another of the predisposing causes mentioned by Dr. Green. *Regular* exercise of the voice, so far from producing a tendency to, or more directly exciting disease of the vocal organs, tends to strengthen them, just as daily use of a particular set of muscles increases their development; it is *irregular* employment of the voice, the use of it in public speaking, when an individual is suffering from cold, or a sudden and strained effort to speak at any time, that frequently gives rise to this affection. It is to the first

of these causes we must attribute the common occurrence of the disease among clergymen, and which, in America, has acquired for it the name of *clergyman's sore throat*:

“Remaining quiescent, or nearly so, during six days of the week,” writes Dr. Green, “these organs on the seventh are required to perform a more than double duty; and this too when, from the fact of their having been so long at comparative rest, they are less capable of enduring the fatigue than if the muscles of which they are composed had been subjected to daily exercise in public speaking.”—p. 171.

The treatment of the disease Dr. Green considers, in the first place, with reference to the topical applications which are to be employed; and afterwards treats of the general remedies which he has found useful. It is to the former, or topical plan of treatment, that he devotes most attention; and as it presents some novelty, it is to it that we wish chiefly to call the attention of our readers.

Numerous remedies have been at various times proposed for the local treatment of chronic diseases of the larynx and pharynx, a short notice of which will be found in our review of MM. Moure's and Martin's treatise on Special Therapeutics, in the first volume of our new series; but it is to MM. Trousseau and Belloc that the honour belongs of having originated the topical plan of treating laryngeal phthisis, and their claim is allowed by Dr. Green.

Of the many substances which have been employed for this purpose, nitrate of silver in solution is very generally admitted to be the most efficacious. MM. Trousseau and Belloc employed a solution of the strength of two drachms to the ounce, or sometimes to the half ounce, of distilled water. Their method of applying it was either by means of a small silver syringe, with a long curved tube, which could be introduced beyond the epiglottis; or by saturating a bit of sponge attached to a rod of whalebone, which, being pressed firmly against the back of the pharynx, discharges some of the solution into the glottis, principally by the involuntary effort of deglutition which it excites. This latter method we have ourselves frequently used, and with much success. But Dr. Green has found another method of applying the solution to the laryngeal mucous membrane, so simple and so efficacious, that, as we before remarked, he has been induced to publish this volume upon its merits. We shall permit him to speak for himself, premising, that he prefers the crystals of the nitrate of silver to the pencils for preparing the solution, inasmuch as the latter often contain nitrates of potash, copper, or lead.

“ *Method of applying the Solution.*—In the treatment of laryngeal disease by the direct application of the nitrate of silver to the diseased surface, I have employed ordinarily a solution of this substance, of the strength of from two to four scruples of the nitrate to an ounce of distilled water. When, however, there are found extensive ulcerations of the epiglottis, or about the opening of the larynx,—ulcerations which it is desirable to arrest at once,—I have not hesitated to apply directly to the diseased parts a solution of double the strength of the last-named. But one or two applications only of a medicine of this power should be made at one time; ordinarily, however extensive the lesions may be, it will not be necessary to employ a solution of greater strength than one composed of four scruples of the salt to an ounce of water. On the other hand, it has been found that one of less strength than of from forty to fifty grains of the nitrate to an ounce of fluid will have but little effect upon a diseased mucous surface where ulcerations exist.

“ In cases in which it becomes necessary to cauterize the interior of the laryngeal cavity, the aperture of the glottis should not be passed at once; the part should be *educated* by applying the solution daily for several days to the faucial and pharyngeal region, to the epiglottis, and about the opening of the glottis.

“ Proceeding in this manner, that exquisite sensibility which belongs to the lips of the glottis is, in a good degree, overcome; and the instrument may then be passed into the larynx, without producing half the amount of that irritation which its introduction below the epiglottis would have awakened at first.

“ The instrument which I have always employed for making direct medicinal applications into the cavity of the larynx is one composed of whalebone, about ten inches in length (with or without a handle), curved at one end, to which is securely attached a small, round piece of fine sponge. The extent to which the rod is to be bent must be varied according to circumstances, for the opening of the glottis is situated much deeper in some throats than in others; but the curve which I have found suited to the greatest number of cases is one which will form the arc of one quarter of a circle whose diameter is four inches.

“ The instrument being prepared, and the patient's mouth opened wide, and his tongue depressed, the sponge is dipped into the solution to be applied, and being carried over the top of the epiglottis, and on the laryngeal face of this cartilage, is suddenly pressed downwards and forwards, through the aperture of the glottis, into the laryngeal cavity. This operation is followed by a momentary spasm of the glottis, by which the fluid is discharged from the sponge, and is brought into immediate contact with the diseased surface.

“ If the patient, on opening his mouth, take a full inspiration, and then be directed to breathe gently out at the moment in which the sponge is introduced, the irritation caused by the application will be much less than when this caution is not observed. The fact,

indeed, has been fully established by repeated experiments, that the introduction into the larynx of a sponge saturated with a solution of the crystals of nitrate of silver, of the strength of forty, fifty, or even sixty grains of the salt to the ounce of water, does not produce, ordinarily, as much disturbance as is caused by the accidental imbibition into this cavity of a few drops of tea, or even of pure water."—pp. 199–201.

When follicular disease of the throat is complicated with elongation and enlargement of the uvula, or with hypertrophy of the tonsils, Dr. Green recommends the removal of these parts by excision, but there is nothing novel in his mode of operation.

The presence of tubercular phthisis in individuals affected with follicular laryngitis, is, in the author's opinion, no hindrance to the topical plan of treatment he proposes: indeed, in cases of what are termed laryngeal phthisis, in which the disease of the larynx is of a true tuberculous nature, he has repeatedly employed it, and, it appears, with very great benefit.

The topical application of nitrate of silver in solution, when "judiciously and perseveringly employed," Dr. Green has found, in a large proportion of cases, to be a perfect cure for the follicular disease of the air-passages which he describes. Cases, however, in which some other affection of the general system may exist, demand internal remedies also. When such are required, he administers nitrate of silver in pill, with extract of hops or conium, the iodide of potassium, calomel, hydrocyanic acid, the tincture of sanguinaria,—a stimulating expectorant much employed in America, where it is indigenous, but never used in this country,—the muriate of ammonia, or the sulphate of morphia, according to the indication which is to be fulfilled. Cod-liver oil he does not appear to have employed, although its efficacy in this affection, occurring in debilitated, scrofulous habits, is unquestionable.

In an Appendix are given numerous letters from physicians of eminence in the United States, who have seen Dr. Green employ his method of applying the solution of nitrate of silver to the larynx, and many of whom have themselves used it with success,—indeed some of them have experienced its efficacy in their own persons: in which testimony is borne to our author's skill, and to the success of his plan of treating this obstinate affection.

These testimonies prevent us from offering any opinion as to the facts we have laid before our readers, inasmuch as *our* views could be based on theoretical notions only,—time not

having permitted us to test them practically yet. We shall only say, that we are fully convinced of the originality of observation displayed by our author, and of the perfect truth of the statements contained in his Treatise.

A Manual of Materia Medica and Therapeutics, including the Preparations of the Pharmacopœias of London, Edinburgh, and Dublin, with many new Medicines. By J. FORBES ROYLE, M.D., F.R.S., &c., &c., Professor of Materia Medica and Therapeutics, King's College, London. 12mo. London, Churchill. 1847. pp. 716.

NATURAL history, chemistry, pathology, and diagnosis, are progressing daily, with parallel and rapid strides. These sciences constitute the foundation of materia medica, and it might be expected that the latter branch of knowledge would share in this general advancement; and it must be admitted that pharmacologia has lately received many important boons from these several sources. The naturalist has given to it matico, Indian hemp, and bebeeru; the chemist has revealed to it a host of valuable medicinal agents; and the pathologist and physician have not been slow to study the action of proposed remedies, and to endeavour to ascertain the diseases in which they might be found serviceable. No doubt, also, the pharmacologist has exercised much industry and research in determining the characters of the different varieties of drugs found in commerce, in detecting their adulterations, and inventing methods by which their purity can be ascertained; he has, besides, displayed much ingenuity in the discovery of formulæ; and the different pharmaceutic operations have received deserved attention; the therapeutic uses of many medicines are also now well understood. Yet, we must confess, in all that regards that inductive generalization which can alone warrant the appellation of science, in the art of predicting the unknown by the assistance of the known, materia medica, at this day, as little deserves the name of "science," as it did in the time of Bichat. There are many books in existence, which will tell the botanical description of the trees from which a bark is obtained, will minutely describe its chemical analysis, and perhaps add the additional information that it is a "bitter tonic, useful in advanced stages of dysentery and diarrhœa;" but there is scarcely any work in print which will guide a practitioner who desires a remedy for a particular indication in disease. Materia medica is, in sad truth "an undigested mass."

This it is which encourages the charlatan, and enfeebles the

advocate of science; pharmacologia is known to be the pregnable point in the ramparts of medicine; to this are directed the assaults of the homœopathist and hydropathist; and until the problem be solved,—*the lesion being given, to find its remedy*,—complete medical education will be impossible. As it is, the student may be taught pathology, he may be instructed in diagnosis, but treatment he can only learn by “experience,” a sad preceptor.

We do not blame Dr. Royle for not having satisfied the desire which every conscientious practitioner must feel for a scientific work on *materia medica*. Probably the time has not arrived for attempting such a work. Physiology and pathology have yet much to achieve, and therapeutics must wait upon their progress. Nor is it likely that a single individual will, at any time, arise with qualifications adequate to the completion of an undertaking so Herculean.

That which Dr. Royle has attempted in the little work before us he has well executed. He has written a manual which will be found extremely serviceable to the student. It contains, in a most concise and lucid form, botanical descriptions, explanations of chemical processes, pharmaceutical formulæ, &c. We cordially recommend it to students preparing for examination, as it is calculated to economise their money and labour.

On the Causes and Treatment of Abortion and Sterility; being the result of an extended Inquiry into the physiological and morbid Conditions of the Uterus, with reference especially to leucorrhæal Affections and the Diseases of Menstruation. By JAMES WHITEHEAD, F. R. C. S., &c., &c. 8vo. London, Churchill. 1847. pp. 426.

THE reader may be aware, from the title of this work, that the object of the author is much more extensive than at first sight would appear; it is, in fact, a Treatise upon the Diseases of Menstruation, Signs of Pregnancy, Abortion, and Sterility. We shall endeavour to give a slight sketch of the author's views upon each of these points.

For some years past he has been carrying on a series of careful examinations, by means of the speculum, into the peculiarities of menstruation, as connected with abortion, and into the special causes of abortion and premature labour; and he has here given us the results. Whilst disclaiming originality, he seems to think that no similar investigations have been undertaken by others, with the exception of Dr. Bennett.

Without professing to know how far the speculum has been used in London since 1831, we do know that it has been longer in use here; and we venture to say, that there are few facts in Mr. Whitehead's volume which are not familiar to practitioners in this city. As to the speculum proposed by Mr. Whitehead, we do not see any peculiar advantages which it possesses over the ordinary glass speculum, and we would certainly recommend that the four-bladed expanding speculum should be employed the first time, as by its means a much more extensive and accurate knowledge of the disease may be obtained. We quite agree with the author as to the mode of using it:

“ The proper and most convenient mode of prosecuting specular inquiry, and of managing the local treatment, is to have the patient reclined on her left side, upon the edge of a bed or couch, in the same position as that employed in this country during the process of parturition. The instrument is introduced without ocular aid, and no part whatever of the person is exposed.”

The remedies can be applied by means of a camel's-hair pencil, or, what is better, of a small roll of lint held by a long pair of dressing forceps.

Menstruation occurs monthly, i. e. about every twenty-eight days, and lasts from four to seven days; but there are considerable deviations from this regularity, even without injury to health. To ascertain the frequency and amount of this variation in *healthy* females, Mr. Whitehead made careful inquiry, and found that, of 520 females who were what is called *regular*, “ 359 had always menstruated regularly, no particular difference being observable either in the length of the interval between one period and another, or in the number of days during which the menses continued to flow :” of the remaining 161 cases, in fifty-one menstruation occurred every lunar month, with a prolongation of the discharge every third or fourth return; thirty-eight every lunar month generally, but every third or fourth time from four to seven days earlier; fifteen had the menses every three weeks generally, but every third or fourth return from four to seven days later; fourteen, every twenty-four days, but occasionally the interval was twenty-eight days; five, every five or six weeks, with an interval of only a month occasionally; two, every eighteen days, with a longer interval now and then; one, every lunar month, with an additional discharge in the middle of every third interval; two, every fourteen days, with occasional prolongations of the intervals; one, every month, but missed every third without injury; and in thirty-two no regularity was observed.

The quantity of menstrual fluid seems, according to our author, to be increased by high temperature. He has quoted Dr. Letheby's analysis (*Lancet*, August 2, 1845), apparently agreeing with its statements; the uterine mucus he has always found alkaline, the vaginal mucus very rarely so; the menstrual fluid is always acid, but of varying intensity; it resembles venous blood, but is less viscid, and it does not coagulate. No doubt can exist that it is secreted by the uterus, and "that every part of the organ, including the upper part of the cervix, is, perhaps, equally engaged in the performance of the function."

The following Table shews the ages at which menstruation commenced in 4000 individuals:

At the age of 10 years,		9 first menstruated.	
„	11	„	26
„	12	„	136
„	13	„	332
„	14	„	638
„	15	„	761
„	16	„	967
„	17	„	499
„	18	„	393
„	19	„	148
„	20	„	71
„	21	„	9
„	22	„	6
„	23	„	2
„	24	„	1
„	25	„	1
„	26	„	1

Thus the average age of the first menstrual crisis is fifteen years and nearly seven months. Of these 4000,

"2127 were employed in mills, warehouses, and places connected with the various processes of manufacturing, at the period of puberty, and for a length of time previous to its advent. Their collective ages amounted to 33,396, affording an average of *fifteen years and nearly eight months*; of whom 551, or 24.02 per cent. suffered under disease consequent upon undue retardation of the functional changes at the commencement. The remainder, 1873 in number, included all that were otherwise circumstanced, as domestic and farm servants, hawkers, sempstresses, and shopwomen, together with a number of educated females, not necessarily engaged in any pursuit, except school exercises. The sum of their ages was 28,982, giving *fifteen years and about five months* as the average age of puberty, and 375, or 20.02 per cent., experienced functional difficulty in form of amenorrhœa at the outset."—p. 81.

Mr. Whitehead enters at length into the influence of temperament, constitution, and climate upon the catamenial function, but as nothing new is added to our knowledge, we shall pass on to the diseases.

Amenorrhœa, when no mechanical impediment exists, and where the organic development is complete, will most usually be accompanied by a series of symptoms indicative of general or local plethora, and marked by quickened circulation, hurried breathing, *malaise*, occasional rigors, thirst, &c., or, if the constitutional powers be feeble, by a chronic state of ill health:

“ The remedial measures indicated are obvious. The first object will be to moderate the inordinate vascular action, to tranquillize the exalted sensibility of the brain and nervous system, and to rectify and restore the vitiated secretions. The ultimate aim should be especially directed to the menstrual functions, their establishment and due performance being essential to the immunity of the system from future mischief.”

The remedies employed in the cases he relates were hip-baths, poultices to the abdomen, external irritation, aperients, and chalybeates.

Sudden suppression of the menstrual flow may be followed by very serious results. The author gives cases of acute peritonitis, partial paralysis, hysteric fits, asthma, cerebral congestion, and apoplexy, resulting from this cause.

Dysmenorrhœa has its origin, according to Mr. Whitehead, in a morbidly irritable state of the uterus, or of those parts of the nervous system in immediate relation with it; but he has not minutely or clearly described this irritable state, nor has he added anything to the treatment.

Four cases of vicarious menstruation are given: one from the nose; another vicarious leucorrhœa; a third from the surface of an ulcer; and a fourth in the form of periodical diarrhœa.

In treating of menorrhagia, the author very properly alludes to the frequency of disease of the cervix as a cause; we believe that this has been very much overlooked. We have repeatedly detected great congestion, a varicose state of the vessels, enlargement of the glandulæ Nabothi protruding at the orifice, and superficial ulceration or fissures of the cervix, giving rise to these attacks.

“ The treatment to be adopted in these cases will necessarily vary considerably according to the state of health of the individual, the circumstances under which the patient may happen to be placed, the nature of the constitution, the quantity and properties of the

discharge and the causes to which it is to be referred; because in some instances immediate abstraction of blood may be called for; in others, the soothing plan, such as may be effected by the administration of opiates and other sedatives, is indicated; and sometimes a course of alterative and tonic treatment may be beneficially practised."

No specific remedies are named, nothing but cautious, general directions given, very good as far as they go, but of very little practical use; and, we must conscientiously add, that, from the amount of experience the author claims credit for, we should have expected more detailed and precise information than we have found in this section on the diseases of menstruation. There are two most valuable remedies in menorrhagia, cold and ergot of rye, which, in suitable cases, rarely fail; to these we can add a third, the tincture of Indian hemp, as prepared by Mr. Donovan of this city. As we are not aware of its having been already recommended in this disease, we feel bound in justice to mention, that our attention was first directed to its employment in menorrhagia by Surgeon Maguire, of Chapelizod. He found it very useful; and on his recommendation we have tried it with great success in doses of from five to ten drops three times a day. It seems to control all menorrhagic discharges except those which proceed from a breach of surface; and we have found it very valuable in the hæmorrhage preceding and threatening abortion, provided such be not excessive.

Passing over the section on the Signs of Pregnancy,—which will not supersede Dr. Montgomery's description,—we shall next notice the two ostensible subjects of the volume, Abortion and Sterility. Mr. Whitehead finds, from calculations, that the actual period of child-bearing is twenty years; the average age of its commencement being twenty-one and a half years, and of its termination about forty-one and a half; there being a period of nearly six years after the last child-birth which is unfruitful, although menstruation recurs regularly. He states the proportionate number of pregnancies for each individual to be twelve, which appears to us rather high, but this includes abortions, false conceptions, and premature births; the average amount of which is one and a half for each individual on a calculation of 2000 persons.

"It is popularly believed that early, especially first pregnancies, have more frequently a premature termination than those which come after. This does not accord with the results of my observations. I am inclined to believe that the third and fourth, and subsequent pregnancies, and one or two of the last,—those, namely, which occur

near the termination of the fruitful period,—are most commonly unsuccessful. 226 of the individuals alluded to in the preceding table were the second time pregnant, of whom 20, or 8·8 per cent., had aborted of the first; and 230 were the third time pregnant, of whom 58, or 25·20 per cent., had previously aborted.”

In 602 cases the period of pregnancy at which abortion or premature labour took place, was as follows: thirty-five at two months; 275 at three; 147 at four; thirty at five; thirty-two at six; fifty-five at seven; and twenty-eight at eight months.

Mr. Whitehead investigated the cause of abortion in 2000 instances, and found that “747 had already aborted once at least; to some the event had occurred several times.” The sum of their abortions was 1222. The following are the causes to which they were attributed:

“Inward weakness, impaired state of health generally, and acute diseases, in . . .	911 cases.
Accidents, mental perturbation, &c. . .	221 „
No assignable cause	90 „
	<hr/>
	1222”

This “inward weakness” is vaginal or uterine leucorrhœa, and in a great proportion of cases arises from disease of the cervix uteri: thus of 378 cases of abortion, 275 exhibited disease of the lower part of the uterus; and of 2000 pregnant women, 1116 were found to labour under leucorrhœa. This, then, is a serious question, and the author has devoted some space to its investigation.

Of the individuals who attributed their abortion “to inward weakness,” 275 were examined with the speculum, either before, or within three or four weeks after the event took place, and in every case disease of the lower, or of the internal part of the uterus, and, in a few instances, of the vagina, was found to exist.

“The symptoms which denote the existence of disease of the uterus are susceptible of scientific arrangement; their seat and character, and the order of their occurrence, being founded upon physiological principles. They may be divided into *pathognomonic*, or those signs which require for their development the existence of the disease in question; and into occasional or accidental disturbances, the latter being common to this as well as to other forms of disease capable of deranging the health generally. Of the former class are: first, leucorrhœal discharges, whether these be simply of a mucous character, or mixed in a variable quantity with pus, sanies, or blood,

provided the latter be not the natural product of menstruation; accompanied, secondly, with an indefinable deep-seated aching of the lower belly. Thirdly, a fixed pain of a peculiar character on one or both sides of the body near the groin, occupying the situation of the inguinal canal, and being generally unaccompanied with swelling. Fourthly, aching of the loins, implicating the region of the kidneys and upper part of the os sacrum. Fifthly, an involuntary and uncontrollable inclination to compress the lower abdominal viscera, by an effort which is expressively denominated 'bearing down.' Sixthly, rigors, lassitude, and remittent feverishness. Amongst the other class of symptoms may be enumerated, disturbance of the urinary organs, as frequent desire to void the urine, with inability to do so with comfort; wandering pains around the chest and abdomen, along the spine, throughout the limbs, and about the back part and summit of the head and face; nausea, loss of appetite, painful digestion, irregular bowels, cramps, palpitation, hysteric fits, convulsions," &c.—p. 279.

The peculiar forms of disease which may give rise to these symptoms, and which cause abortion, are, first, inflammation and superficial erosion of the lower part of the uterus; second, varicose ulceration; third, œdema of the womb; fourth, fissured ulceration of one or both commissures; fifth, induration of the cervix; sixth, endo-uteritis, or inflammation of the lining membrane of the womb; seventh, follicular ulceration; eighth, gonorrhœal virus; ninth, syphilitic disease; tenth, prolapsus uteri.

Most of these have long been regarded as at least occasional causes of abortion; but we believe that Dr. Bennett was the first to bring before the profession in this country the views of M. Boys de Loury, as to the frequency of erosion and ulceration as a cause of miscarriage and premature labour. Mr. Whitehead, apparently by independent investigations, has arrived at the same conclusion, and we can confirm their observations.

The treatment upon which Mr. Whitehead relies in *erosion of the cervix* is leeching (when the system will bear it) of the hypogastrium or os uteri, anodynes, and lunar caustic to the ulcer. We have found great benefit from the use of the strong nitric acid in the first instance, and afterwards of the caustic tincture of iodine.

In addition to the caustic applications, some astringent, as a solution of sulphate of zinc, with wine of opium, tincture of matico, &c., will be necessary in *varicose ulcer*, with a due attention to the general health.

In *œdema of the cervix uteri* "the treatment indicated is almost entirely constitutional. Small general bleedings should

be practised at intervals, with the exhibition of calomel and digitalis in moderate doses, and saline aperients, combined or not with quinine, as occasion may require."

Fissured ulcer of the cervix is to be treated by alteratives; in some cases by leeching, tonics, and the solid nitrate of silver.

In *endo-uteritis* "the treatment consists in general or local bleeding, regulated according to the strength of the patient and the urgency of the symptoms; in the exhibition of alterative and soothing medicines; and in injections within the uterus, when unimpregnated." With regard to the latter remedy, the author has previously (p. 163) recommended a "weak solution of the nitrate of silver, with extract of hemlock, or an ointment of the same material;" and he states that no "disturbance or discomfort arises from these measures." This does not tally with our experience; on the contrary, we have seen violent pain follow injections into the uterus, and in France severe consequences have often resulted.

We must pass over the treatment of the remaining causes of abortion, in which Mr. Whitehead proposes nothing new, and say a few words upon the last section of the work, on sterility. The only cause upon which the author dwells at length is chronic *endo-uteritis*, or irritable uterus, and this, he states, may prevent pregnancy in three ways:

"In the first place, the inflammatory action going on within the uterus, and which is liable to be aggravated under states of venereal excitement, may prevent the formation of the *membrana desidua*, and the ovum, even though impregnated, is necessarily thrown off without any manifestation of its existence in the fertilized state; secondly, the diseased condition of the lining membrane of the uterus may be extended to the Fallopian canals, obliterating for a time their internal orifices, so as to oppose an insurmountable obstacle to the admission of the spermatic fluid within them, and thus to render the fertilizing effort abortive; thirdly, the nature of the secretion furnished by the internal surface of the uterus or of the vagina, under certain states of disease, may be inimical to the active existence of the spermatozoa, occasioning their destruction before they arrive at the extricated ovule."

The researches of M. Donnè have shewn that the spermatozoa are capable of living for some time in the healthy mucus of the vagina or uterus, but that certain changes in this destroy them immediately. One of these changes he found to be an increase of acidity. Now, in ordinary cases, the alkaline mucus of the uterus mixes with the acid mucus of the vagina, and tempers it, but in disease it may either be withheld or may become acid; in either case the spermatozoa will perish. At

least this seems to be Mr. Whitehead's view of the way in which endo-uteritis acts in causing sterility, and it is an ingenious one, and deserving of careful investigation.

In conclusion, we have only to add, that the work is a valuable one, and very creditable to the author; the first part is superficial, but the second is more minutely and carefully written: it would not have been less valuable had there been more reference to modern works on the subject.

[The profession are, perhaps, aware, that some discussion has arisen between Dr. Bennett, of London, and Mr. Whitehead, as to the claims of the former for having first called attention to the use of the speculum in the management of certain uterine diseases in this country. Dr. Bennett undoubtedly deserves very great credit for having, both in his book, and in his Lectures published in the *Lancet*, impressed upon the profession the urgent necessity of making use of the speculum; but at the same time we are bound to state, that it was an instrument employed by many well educated physicians and surgeons in the British Islands, and among the rest, it would appear, by Mr. Whitehead, long prior to Dr. Bennett's publications. It would seem, however, as if those who employed the speculum either feared to acknowledge it, or wished to keep a knowledge of its value to themselves. In this city it had been not only used extensively, but its employment publicly taught. We can vouch for its extensive employment by Dr. Evory Kennedy in the Lying-in-Hospital in the years 1833 and 1834, in which institution he established wards for the investigation and treatment of diseases of the uterus by its aid; and the valuable collection of drawings (some of which were published in our February Number), which he possesses, were made with the assistance of the speculum during his Mastership of that institution, from 1833 to 1840.—ED.]

The Human Brain ; its Structure, Physiology, and Diseases ; with a Description of the Typical Forms of Brain in the Animal Kingdom. By SAMUEL SOLLY, F. R. S., Senior Assistant Surgeon to St. Thomas's Hospital, &c., &c. Second Edition. 8vo. London, Longman's. 1847. pp. 688.

ON the appearance of the first edition of Mr. Solly's work, in the year 1836, we noticed it briefly in our former Series, and highly commended the method of dissecting and describing the brain from below upwards, recommended by him. We remembered too well the difficulties we experienced in our own days of studentship, in attempting to imprint on our memory

a dry list of the names of the various parts of the brain, the functions of which we thereby obtained no aid in comprehending, not to hail with delight the proposal of a means for examining that organ, by which the parts would be described “with reference to their structure, their functions, and their analogies in the nervous systems of the lower orders of animals.”

In our review of the present edition we propose to confine our attention chiefly to the section on the pathology and diseases of the brain, which extends to 350 pages, and which is altogether new. Before proceeding with our task, however, we think it well to lay before our readers a recapitulation of the anatomical portion of the book, the more especially as a knowledge of it is requisite to a right understanding of the views propounded in the pathological, and this we do in the author's own words:

“The description of the course and termination of the various tracts of medullary neurine which, with their ganglia, constitute the brain or encephalon, being now concluded, it will, I think, be useful to take a general review of the subject, by a recapitulation of what has been stated in detail separately; and we will reverse the order of our observations, proceeding from above downwards instead of from below upwards.

“In the first place, we have an extensive surface of cineritious neurine, the *hemispherical ganglion* (speaking merely of one side of the brain), which, in the higher orders of animals, is convoluted or folded in a peculiar manner.

“In apposition to the whole of the vesicular neurine of this ganglion, there are tubular fibres which radiate through it, and are incrustated by its nucleated cells.

“These fibres are disposed of in four different ways: 1st, some of them, commencing from the convolutions of the anterior, middle, and posterior lobes, pass through the corpora striata, and, forming the inferior layer of the crus cerebri, pass through the pons Varolii, so as to form the anterior columns of the cord, as previously described—the *motor tract*; 2nd, others commencing in the nerves of sensation, and after passing through the pons Varolii, and emerging from the substance of the thalamus, terminate in the same neurine that gave origin to the last—this is the *sensory tract*; 3rd, others, passing from one side of the brain to the other, and in apposition to the internal surface of all the convolutions, are those fibres which, collected into a mass, form between the hemispheres that wide bridge, if I may so call it, the *great transverse commissure* or *corpus callosum*; 4thly and lastly, in contact with all the convolutions are the fibres of the superior and inferior longitudinal commissures, which, connecting together those convolutions which are situated on the same side of the mesial line, or different portions of the same hemispherical ganglion, so far differ from the trans-

verse commissure, which connects those situated on opposite sides, or the two distinct but corresponding ganglia.

“ The first and second set of fibres, which radiate from the external surface of the two large ganglia of the anterior and posterior columns, as from a common centre, forming, however, in their radiation, only half a circle, were designated by Gall and Spurzheim the *diverging fibres*. The third set of fibres, which converge towards the centre of the brain, the transverse commissural, were distinguished as the *converging fibres* by the same author.

“ The above descriptions demonstrate that the encephalon or brain in the human subject is not a large solid mass of matter, in the interior of which are cavities scooped as it were out of its substance to be appropriately denominated ventricles, but that it really consists of ganglia or collections of cineritious neurine, placed on each side of the mesial line. Some of them being the appropriate ganglia of the nerves of sensation ; as, for instance, the olfactory ganglia, the optic ganglia or tubercula quadrigemina, the auditory ganglia or posterior pyramidal bodies, the pneumogastric ganglia or restiforme ganglia, the olivary bodies or lingual ganglia ; the others being the motory and sensory ganglia, as the corpora striata and thalami nervorum opticorum. The hemispherical ganglia again, that they might present the greatest possible extent of surface, are folded up into innumerable plaits, and thus cover or surround every other ganglion within the cranium, so that on first removing the skull-cap nothing can be seen but the convoluted surface of these extensive ganglia.

“ And here let me insist upon this important principle in the study of the brain, which is also one of the first ideas that the student should acquire regarding its composition, namely, that it consists of corresponding or symmetrical parts on each side of the mesial plane, and that instead of regarding the fissures of separation between its different portions as forming ventricles or cavities, he must direct his attention to the ganglia which bound the fissure, and the structures called commissures, which, connecting them together, cross the fissure and necessarily alter its character in different points, masking it, it is true, but not at any place changing the fissure into a true bag or circumscribed cavity. The third, the *iter a tertio ad quartum ventriculum*, the fourth, and fifth ventricles, we have already seen, are, in truth, no more than the successive dilatations from below upwards of the posterior fissure of the cord ; difficult enough to be understood when these are viewed in different situations and unconnected one with the other, as in the ordinary mode of dissecting the brain, but which seem necessary and obvious where its parts are traced in connexion with one another.”—pp. 280–282.

In describing the diseases of the brain, Mr. Solly classifies them as follows: 1. Anæmic affections; 2. Hyperæmic; 3. Convulsive; and 4. Organic. A classification which, sufficiently

simple, and apparently sound in theory, is, we think, but little adapted for practice. Do we not daily meet with anæmic and hyperæmic apoplexy? Are not convulsions nearly as often connected with a deficient as with an over supply of blood to the cerebral organs? And are not convulsive disorders most generally dependent on organic disease of the brain? What, then, can tend more to confuse the mind of the student than an arbitrary and deceptive classification such as this? For practical advantages, the best method of describing the diseases of the cerebro-spinal system, is, we think, under the three heads of: 1. Affections of the brain, and its membranes; 2. Affections of the nervous system; and 3. Affections of the spinal cord and its membranes.

Before proceeding to speak more immediately of the pathology of diseases of the brain, the author notices the views which have been held as to whether the quantity of blood circulating within the cranium ever varies; an account of which views we have already given to our readers in the review of Dr. Burrowes' *Treatise on Disorders of the Cerebral Circulation*, in our last volume. We wish, however, to repair here an omission which we then made, in not stating that Dr. Graves combated the doctrine laid down by Abercrombie, and which was at the time so generally received as correct, a long time before any doubt was thrown on it by Dr. Burrowes or any other writer: a reclamation which we feel the more bound to make, now that our countryman's labours have escaped the notice of Mr. Solly also.

The first disease the author describes amongst anæmic affections of the brain, is delirium tremens: and were we disposed to offer any further arguments against the classification adopted, we might well do so here; for what arrangement could be more faulty, or less natural, than that in which anæmic coma, hydrocephalus, ramollissement, and delirium tremens, are placed in juxtaposition. In his account of the causes of delirium tremens we were surprised at an omission which Mr. Solly, as a practical surgeon, ought not to have made,—namely, not noticing the fact that this disease is very frequently produced, in individuals of drunken habits, by sudden losses of blood attendant on injuries; and this too, although he mentions having often seen the affection in patients, in the surgical wards of the hospital, who had met with some severe injury. He lays great stress, and deservedly, on the necessity of making an accurate diagnosis between the delirium the immediate effect of drink,—*delirium briosorum*,—and true delirium tremens; but he seems

to have often found the diagnosis much more difficult than we have, and, in consequence, suggests the following, which, we cannot avoid calling, very dangerous practice :

“ I have almost always found, that when large doses of opium fail in producing sleep, we ought to consider that the case is one of hyperæmia, and not anæmia ; and if we change the treatment, relieving the congestion of the brain, sleep soon follows. . . . Leeches and the cupping-glass are the best agents.”—p. 358.

Now, we repeatedly meet in practice with cases of delirium tremens, which resist the steady employment of opiates for forty-eight hours, or even longer, and almost immediately yield on the addition of a fourth of a grain of tartar emetic to each dose of the opiate ; a mode of treatment for many years taught in the Dublin school. Such cases, we have no doubt, would prove fatal, were Mr. Solly's depletory measures employed, with the idea of the disease not being true delirium tremens.

Inflammatory diseases of the brain form the first division of *hyperæmic* affections treated of by the author. And here we find the anatomical doctrines, the recapitulation of which is given above, brought to bear immediately on the pathology of the organ. Instead of the classification which is at present in use, and which is adopted in nearly every modern Treatise on the Practice of Physic,—that into diseases of the membranes, *meningitis*, and diseases of the brain itself, *phrenitis*,—Mr. Solly, admitting that inflammation of any single ganglion within the skull can scarcely be present without all the remaining ganglia being more or less affected, proposes the following arrangement when the inflammation is restricted : 1st, Inflammation of the hemispherical ganglion ; 2ndly, Inflammation of the upper portion of this ganglion, as contradistinguished from that inflammation which is at the base of the brain ; 3rdly, Inflammation of the medullary or tubular substance ; and 4thly, Inflammation of the cerebellum.

Let us now see a little in detail what are the characteristics of inflammation, as it affects the vesicular and tubular portions of the brain.

Inflammation of the hemispherical ganglion is usually described as *meningitis*, although, in most instances, there are no *post mortem* indications of inflammation of the membranes discoverable ; increased vascularity of the pia mater depends so much on the position in which the body is placed after death, that it is difficult to be decided on ; dryness of the arachnoid is very uncommon ; and opacity of this membrane is generally looked upon as being the result of *chronic* inflammation. The

morbid alterations produced in the hemispherical ganglion by inflammation affect both its colour, and consistency—softening and hardening. The natural colour is, according to Dr. Bright, “a light fawn-coloured brown;” in disease, according to Dr. Solly,

“The colour varies from a pale tint, scarcely darker than the medullary substance, up to an intense purple; occasionally it assumes a bright scarlet; but we seldom have an opportunity of seeing it in this state, for it is the result of active inflammation, and patients seldom die during this stage of the disease.”—p. 398.

With regard to consistency: it varies, when softened, from the slight change only observable from its separating in patches, to the conversion into a pulp nearly as fluid as cream; it is sometimes, but not often, unnaturally hard.

The description given by the author of the “symptoms and effects of inflammation of the hemispherical ganglion” is as follows:

“We will next consider attentively one of the most important laws of vital action which pathology has yet unfolded in relation to the nervous system, namely, that the first effect of the first stage of inflammation of neurine is to excite and exalt to an unnatural degree exactly the same kind of power which we have reason to believe resides in it in a normal state. For instance, the first effect of inflammation of the surface of the brain is to excite the mental faculties, to produce great irritability of temper, and constant restlessness or desire for action. If the inflammation be arrested at this point, the patient recovers his reason; but if it pursues its ravages undisturbed, limiting its destructive effects to the spot where it commenced, without extending to that portion of the brain which is beneath, it annihilates the intellect, but does not effect the muscular system; while, on the other hand, if the inflammation extend further, reaching the instruments by which the will travels to the muscles, it first produces *convulsive action* in these muscles, which afterwards become perfectly paralytic; in this case the integrity of the neurine, through which volition traversed to call these muscles into action, is compromised, and its power, therefore, as an instrument for the production of voluntary motion, destroyed.

“The same phenomena are presented to us by observations on the instruments of sensation, as far as we are at present acquainted with these instruments, for we generally find, when inflammation attacks the tract of sensation (the first symptoms existing a sufficiently long time to be accurately observed), that previous to the obliteration of sensibility in any texture, the normal sensibility of the part is exalted, the patient suffering the most severe pain both at the spot where the nerves of sensation originate, and in the brain itself where they terminate.

“The first effect of unusual arterial action of the hemispherical gan-

glion is to exalt the intellect; this effect is often so transient that it may be unobserved. We meet with a good illustration of it in the effect produced by alcoholic stimuli.”—pp. 401, 402.

The views here propounded are based on the two following propositions:

“ 1st, That the hemispherical ganglia are intimately connected with the intellectual powers, and that it is in them peculiarly, and not in the whole cerebral mass, that these powers reside. 2nd, That the medullary substance beneath is in all probability merely the passive servant, as it were, of the cineritious, either as the conductor of its commands to the muscles, or of the materials, namely, the various impressions made on the peripheral extremities of the nerves of sense, which the cineritious perceives, and with which it works.”—p. 402.

We thus find that Mr. Solly lays especial stress on the disturbance of the intellectual faculties, as opposed to derangement of muscular action in the diagnosis of inflammation of the hemispherical ganglion—the sentient portion of the brain. Indeed we fully agree with him in thinking, that the *condition* of the mind does not receive sufficient attention in the attempt, so generally made by the practical physician, to define accurately that portion of the brain which is the seat of disease. It is not, however, to be supposed that the motor powers are altogether unaffected, indeed in many cases they are much deranged, but the derangement consists in the presence of “different kinds of spasms, from a mere trembling, or subsultus tendinum, up to the most violent contraction:” but there is no decided and persistent paralysis.

We cannot agree with Mr. Solly in the propriety of still persisting to call inflammation of the hemispherical ganglion *meningitis*, now that its true seat has been discovered; his argument for using it—its brevity—is surely a bad one. The term *paraphrenitis*, for the use of which we can go as far back as Galen, would be, we think, much more applicable; and *phrenitis* could be restricted to designate inflammation of the tubular neurine, or medullary substance of the brain.

“ I never examined after death,” says Mr. Solly, “ a case in which inflammation was limited to the *tubular portion* of the hemispheres. In those cases on record where this occurred, the disease was ushered in with headach, then convulsions, soon followed by paralysis: if the disease extends upwards and outwards to the hemispherical ganglion, then the mental faculties will be more or less excited and perturbed; if downwards to the ventricles, then, effusion taking place, coma is the consequence.”—p. 461.

These pathological facts are highly corroborative of the author's conclusions as to the distinctive offices of the two great divisions of the brain,—the cortical and medullary substances of the older anatomists,—the vesicular and tubular neurine of the modern.

Inflammation of the tubular neurine, or, as we would term it, *phrenitis*, is very insidious in its mode of attack; simple head-ach, not of a severe character, is usually present for a long time, but this is often unnoticed, and the occurrence of convulsions previously to any sign of mental excitement is in general the first, and certainly the most characteristic symptom, which attracts attention. Coma, or persistent paralysis, usually occurs early in the disease; and the occurrence of vomiting is a symptom of much importance, and one which should not be overlooked. Ramollissement is the morbid change produced in this part of the brain by inflammation, and this alteration occurs in most cases very rapidly.

The author considers at much length the treatment of inflammatory affections of the brain, concluding with the following recapitulation of his views:

“ In the treatment of all inflammatory affections of the brain, the following broad principles must be attended to :

“ 1st. There is no time to be lost,—even minutes are of value.

“ 2ndly. That inflammation of the brain is a depressing disease, and that, as a general rule, general blood-letting is not often admissible.

“ 3rdly. That, though general blood-letting may sometimes be attended with benefit at the time, the good derived from it is seldom permanent.

“ 4thly. That local blood-letting, by leeches and cupping, is generally useful, and especially in cases of insomnolence, arising from abnormal action of the brain.

“ 5thly. In cases of insanity, where opium has failed to produce sleep, leeches and cold applications generally will; and if they do, it is strong evidence that the excitement arises from hyperæmia, and not from anæmia, as in that of delirium tremens.

“ 6thly. That aconite and digitalis are the best sedatives, especially when combined with mercury.

“ 7thly. When it is advisable to salivate rapidly, raise the cuticle by boiling water or a similar escharotic, and dress the surface with the strong mercurial ointment.

“ 8thly. Always commence the treatment with a brisk mercurial purgative.

“ 9thly. Soothe the patient's feelings in every way.

“ 10thly. Never leave anything that is disagreeable to the patient to

be done by a nurse or attendant, such as the application of leeches, &c., but *persuade* him to have them applied.

“11thly. Never lose your patience in the treatment of a chronic case, or try to hasten the cure by increasing the doses.

“12thly. When it is considered necessary to continue the use of mercury for a lengthened period, combine tonics with it.”—487, 488.

We have thought it well to give this summary of Mr. Solly's treatment in his own words, although we cannot say that we give our entire approval to the general principles he advances. His arguments in support of them are, however, well worthy of a careful perusal, supported as they are by numerous cases from his own practice and that of others. For these we must refer our readers to the book itself.

The author restricts the use of the term *apoplexy* to designate *cerebral pressure*, whether caused by sanguineous or serous effusion, or by distention of the vessels without extravasation,—such pressure not being the result of direct violence. Having given a general outline of the symptoms both immediate and premonitory of the disease, he proceeds to describe the effects of pressure with reference to the seat of the extravasation. When the effusion takes place into, or on the surface of the *medulla oblongata*,—the former of which seldom occurs,—it produces death more *suddenly* than when it takes place in any other part of the brain; in consequence, manifestly, of this being the respiratory centre. If the effusion be first into the *pons Varolii*, and secondarily into the medulla oblongata, the first effect is paralysis of one or both limbs, without derangement of the intellect,—the hemispherical ganglion being untouched,—gradually followed by paralysis of the respiratory organs, and of death from suffocation.

If the *crus cerebri* be the seat of the extravasation, paralysis of the limbs of the opposite side of the body, and often of the opposite eye also, will be the consequence. Lesions of the *corpus striatum* are invariably followed by paralysis, but not, as some physiologists and pathologists have supposed, of the lower extremities only: Mr. Solly cites a case from Andral, in which the upper and not the lower extremity was the seat of the paralysis.

Morbid anatomy has not hitherto aided much the views of the physiologist as to the functions of the *optic thalamus*, for it often occurs that extravasation here, is followed by paralysis of motion and not by anesthesia, which we would not expect were it the ganglion of the sensory column. In truth, although in many instances, and more especially in those we have now gathered from Mr. Solly's book, morbid anatomy fully confirms

the views of modern physiologists, and the physician can often decide on the precise seat of the lesion in apoplexy, numerous cases occur where both the physiologist and pathologist are altogether at fault, and we are forced to admit that there is something more than mere materiality in the brain.

In effusion into the *tubular* substance of the brain, the intellect recovers completely after the first effect of the shock has passed away: and the most characteristic symptom of pressure on the *hemispherical ganglion* is coma. Both facts are highly corroborative of the use of these parts.

Extravasation of blood into or on the cerebellum is invariably followed by paralysis on the opposite side of the body, the sight and hearing being in general secondarily affected. Mr. Solly states, that in many cases there is also "decided disturbance, generally excitement, of the generative organs;" but this statement does not agree with our experience, nor is it borne out by the cases he narrates; we rather think it had its origin in the author's preconceived phrenological views.

The following observations as to the general principles to be observed in the treatment of apoplexy, are worthy of being borne in mind by every practising physician:

"In the treatment of apoplexy, the first thing to determine is not so much whether the effusion is serous or sanguineous, but whether it is of a sthenic or asthenic character, whether our patient will bear depletion, or whether he is depressed, and whether the disease itself is the result of exhaustion. With regard to our diagnosis of the seat and nature of the effusion, this is more important in relation to our prognosis of this disease than our treatment. I do not mean to undervalue careful diagnosis in these cases; on the contrary, I consider it of the greatest importance, and no pains can be too great which will assist us in coming to a right conclusion. In these cases the friends are of course extremely anxious, and our prognosis, whether favourable or otherwise, must depend on the conclusions we arrive at regarding the cause, the seat, and the nature of the effusion. If the *cause* of the effusion be extreme plethora, and some accidental circumstance, such as posture, or straining at stool, without any disease of heart and vessels, then our prognosis might be favourable. If the *seat* of the effusion appears to be at the base of the brain, but not near the medulla oblongata, then it may possibly be remedial. These are merely illustrations of the fact, that though our treatment may be the same wheresoever the effusion may have occurred, and, in many instances, howsoever it may have been produced, our diagnosis ought yet to be made with the same care, and is of nearly the same value, as if the whole plan of our treatment depended upon it.

"Our remedies in all cases are few and simple. First in the list stands blood-letting, the most valuable remedial agent in some cases, the most dangerous in others. Many a valuable life has been saved by

the prompt and free use of the lancet : more have been hastened into eternity by its indiscriminate employment."—pp. 536, 553.

We have, in our review of Dr. Burrowes' and of Dr. Cope-
man's books in our last volume, called attention to the danger-
ous results which followed the general employment of bleeding,
which was, and to speak the sad truth, too often is, even now,
practised in the treatment of apoplexy. Indeed there are few
cases which test more the skill of the medical practitioner, than
the *immediate* determination (for such is always requisite), as
to whether the lancet is or is not to be used in an apoplectic fit.
And when is the physician's resolution more frequently tempted
to decide against his better judgment? The popular prejudice
of bystanders, or of the patient's friends and family, crying out,
"bleed the man, he is in a fit," and the whisper in the physi-
cian's ear, "if the patient should die without being bled, the
blame will be laid at your door," too often, we fear, succeed in
warping the judgment derived from the results of experience.
In such cases the only advice we can give is, to shut out from
view all ulterior results as regards ourselves, and with a "*mens
conscia recti*," let the termination be what it may, we shall
have, what is above all to be prized, the approval of our own
conscience.

Convulsive affections are next considered by the author.
Just as irritation, or inflammation of the hemispherical ganglion
produces mental excitement, so does inflammation or irritation
of the tubular neurine cause muscular convulsions. The great
importance of convulsions as a symptom, in injuries to the
head, is fully dwelt upon, and the rules generally received at
present, as to the use of the trephine in such cases, are freely
canvassed; it being Mr. Solly's opinion, that, in the absence of
cerebral symptoms, the use of the trephine is not justifiable,
"unless there is a very decided evidence of a wounded dura
mater from splintered portions of the inner table."

Epilepsy is viewed by the author as being primarily an af-
fection of the brain and not of the spinal cord. He propounds
the following theory as to the pathology of an epileptic fit:

"The first morbid action is a sudden determination of blood to the
brain, which expends itself in the secretion of that nervous power,
which, in a state of health, is employed by the brain to convey volition
to the muscles, and which power is, I have no doubt, identical with elec-
tricity. This excessive secretion is carried off by the motor nerves, like
a discharge from an electric battery, and, from its quantity and excess,
produces excessive action of the muscles. It is another illustration of a
law that we had occasion to decide upon already, namely, that the first

effect of arterial excitement in every secreting organ is to excite to an unnatural degree the natural function of the organ. We know that mental emotion will cause a sudden determination of blood to other organs, which, according to the nature of the part, will be followed or not by secretion.

“Blushing, and erection of the penis, are instances of sudden determination of blood to a particular part. And the lachrymal glands, salivary glands, testicles, prostate gland, gastric glands, and even the kidneys, often pour forth their secretions so abundantly and so suddenly, that the formative fluid, the blood, must have circulated through their capillaries in greater quantity and with greater rapidity than when the glands were at rest, and their secretions suspended. I think that the periodic attacks of mania, with which many of the insane are afflicted, may be regarded in this light.

“The vessels which are especially the seat of this morbid action, I suspect, are those of the choroid plexus, and one of the layers of the cortical substance. The choroid plexus is frequently found hypertrophied in the brain of epileptics, assuming an almost fleshy appearance. This hypertrophy would very probably be the effect of repeated action. It is also the seat of small tumours, generally like hydatids.”—pp. 590–592.

Of the various medicines which have been employed in the treatment of epilepsy, Mr. Solly has found the sulphate of zinc, the nitrate of bismuth, the oxide of silver, and digitalis, more or less useful; but it is from the two latter that he thinks he has derived especial benefit. The use of digitalis he states that he derived from Dr. Corrigan's paper in the *Dublin Hospital Gazette*; but we have reason to know that it originated with the late Dr. Sharkey of Cork; and his son published his own experience of its effects before the date of Dr. Corrigan's first employment of it. We have ourselves administered digitalis extensively in the treatment of epilepsy, and we must express our opinion that it is not the panacea for this disease it was so confidently stated to be. There are unquestionably some cases in which, when its depressing influence is fully manifested, the fits become less frequent; but in *all* such cases that we have seen, the fits return with their original force and frequency on ceasing to use the medicine. Nor can we understand from his published cases, how our author could have arrived at any other conclusion. Its effects as a remedy in epilepsy are well stated in some letters received by Mr. Solly from Dr. Headlam Greenhow, of North Shields,—an eminent provincial practitioner in England, whose name cannot be unfamiliar to our readers,—with reference to a case they attended together, and which are published in the report of that case:

“The only remedy (the digitalis) which has really appeared to control the attacks, has produced much disorder of the general health. In another case in which I have tried the same remedy (a female), the attacks have been less frequent, but have nevertheless returned at regular intervals. I am satisfied that digitalis occasionally exercises a very decided influence over the complaint, and I think it may prove successful in a few instances; but my experience leads me to think its administration requires great caution, and I should scarcely again persist so long in its use as I have done in Mr. S. T. P.’s case.”—p. 630.

Again, in another letter:

“I have advised a trial of the digitalis in several cases since Mr. S. T. P.’s, but have not personally superintended the treatment, nor found it exercise the same decided influence which it did in that instance.”—p. 632.

The author concludes his volume with a short account of the inorganic diseases and of hyperthropy of the brain; it is an excellent *résumé* of all that is at present known on these subjects; but it does not contain any additions of his own sufficiently novel to require notice.

We have now brought to a close our observations on the second edition of Mr. Solly’s monograph on the brain. It will be perceived that, as we stated in the commencement of our review, we have confined our notice to the second part of the book,—that on the *diseases* of this important organ; and of it we have given, we trust, a fair analysis, and one sufficiently full to induce our readers to study the volume itself. We have differed occasionally from our author, but only on some points which cannot in the least affect the value of his original remarks.

We cannot, however, conclude our review without noticing the unfair treatment which the researches of some of our countrymen have met with in Mr. Solly’s book; and this has the more surprised us, inasmuch as Mr. Solly’s investigations into the nervous system, are in themselves sufficiently praiseworthy to permit him to afford their due meed of praise to others. With reference to the arrangement of the optic nerves and their decussation, he makes no mention of the investigations of Dr. Power, published in the twenty-second volume of our former series, nor of the elaborate article of Dr. Mayne in the *Cyclopædia of Anatomy and Physiology*. But it is principally with respect to Dr. Todd that we have to complain. Mr. Solly has, indeed, quoted Dr. Todd’s book on the Brain, but he has not even *once* mentioned the name of the book he

quotes; referring, in every instance, to the work of Dr. Todd and Mr. Bowman on Physiology, whilst the quotations are taken from the work of the former gentleman only—which was reprinted from the Cyclopædia of Anatomy and published in 1845; thus making it appear that in all his labours Dr. Todd was conjoined with Mr. Bowman. Moreover, the extracts taken from Dr. Todd's book are very scanty,—in some instances garbled; and where opinions are cited, the reasons on which they are based are but seldom given; and this is the more remarkable, as Mr. Solly's volume abounds in long quotations from other writers, to whose works the references are in general most precise.

We regret much being obliged to make these severe remarks, which our sense of justice compels, for Mr. Solly's book is written in the true spirit of philosophic inquiry.

The Dublin Dissector, or System of Practical Anatomy. By ROBERT HARRISON, M. D., M. R. I. A., Professor of Anatomy and Surgery in the University of Dublin, &c., &c. Fifth Edition, with numerous Illustrations. Dublin, Hodges and Smith. 1847. 2 vols. pp. 871.

THE intrinsic merit of the Dublin Dissector, as a system of practical anatomy, has been long acknowledged; and has, in no slight degree, contributed to maintain the high reputation which Dublin enjoys as an anatomical school. Since its first appearance in 1827 it has passed through four editions; each succeeding one containing numerous additions and improvements. The fourth having been, for several years, out of print, Dr. Harrison has been induced by his publishers to prepare the present edition; and though we, in common with many others, have often felt disappointment at the unavoidable, but long postponement of its completion, we cannot now regret the delay which has enabled him to produce it in so valuable and perfect a form.

A work which has already received such solid proofs of public approbation, may fairly be supposed to stand too firmly fixed in the favourable estimation of the profession to require either introduction or review; nevertheless, the present edition differs so materially from its predecessors, that we consider it our duty to point out to our readers some of its most prominent and striking improvements.

In order to place his work on a level with the present advanced state of the science, the author has introduced a large amount of new matter, particularly on general or structural anatomy, on the nervous system, and on the different organs of sense. Many articles have been completely rewritten; a few inaccuracies which escaped his observation in the previous editions have been corrected; and the whole revised with much care, so as to render it an accurate and complete, though condensed, treatise on human anatomy.

The descriptions are illustrated by 160 well-executed woodcuts, some of which are from original drawings by a distinguished artist, whilst the remainder are reduced copies of engravings in the most celebrated standard works of the present day. A copious index of the entire, the want of which was much felt in the preceding editions, is also annexed to each volume.

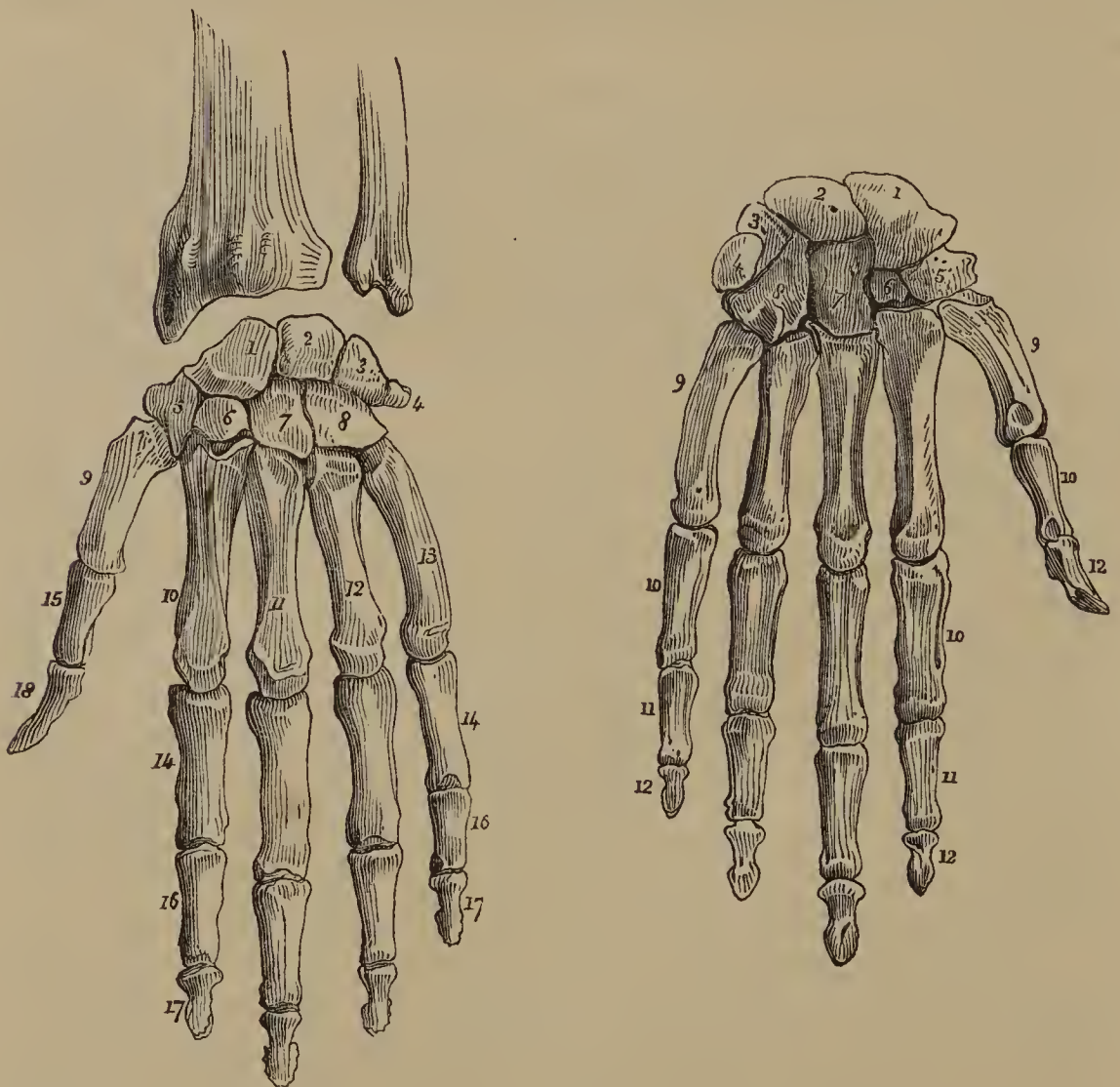
The arrangement originally adopted by Dr. Harrison, and which subsequent experience has shewn to be best calculated to assist and improve the student, is very generally adhered to in the present volumes. In the descriptive details, directions are given as to the best mode of displaying the anatomy of each region, and of obtaining the most correct knowledge of its relations; and particular attention is directed to those parts most useful in a practical, or most interesting in a physiological point of view.

The first volume contains the anatomy of the external parts of the head and face; the anatomy of the neck; of the thorax and its contained viscera; of the upper extremity; of the abdomen, pelvis, and their contents; of the perinæum; of the organs of generation; and of the lower extremity. The second volume comprises the anatomy of the vascular system, including arteries, veins, and lymphatics; the anatomy of the nervous system; of the organs of sense; of the osseous system; and of the articulations. In an Appendix are given some useful directions for conducting *post mortem* examinations, and for making dried preparations of arteries and veins.

Though the eminence of the author as an anatomist, and the high position he at present occupies in the Medical School of Dublin, may be accepted as an ample guarantee for the efficient performance of the task he has undertaken, we shall present our readers with a few extracts and illustrations, as specimens of both the matter and manner of the additions to the *Dublin Dissector*. An accurate estimate, however, of their extent and value, can only be derived from a reference to the work itself.

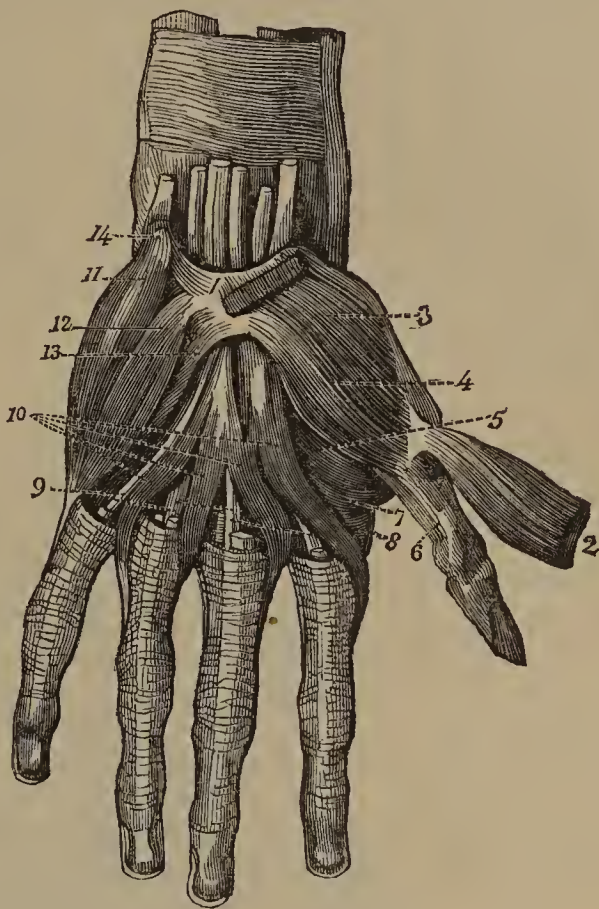
In the first volume we find the following remarks introductory to the description of the muscles of the hand:

“In conducting the dissection of this region, the student should make frequent and careful reference to its skeleton; we may observe that few portions of the animal frame present more interesting characters for minute anatomical examination than the human hand, as it, most probably, affords the best example that could be adduced, not only of superiority in the human organization, when contrasted with that of any other created being, but also of the most perfect adaptation of structure to function, of means to an end, of design in a plan, and of perfection in its execution. The great number of small bones, twenty-seven in all, with their joints and ligaments so securely connected, and so neatly adapted, as to combine the opposite qualities of strength and freedom of motion, all collected into so



small a space, with the numerous long and slender tendons, elegantly shaped, and each confined in its appropriate highly polished sheath or groove; the muscles of these, some large and strong, others small and weak, all linked together in the closest sympathy, and endowed with powers of executing the most varied motions,

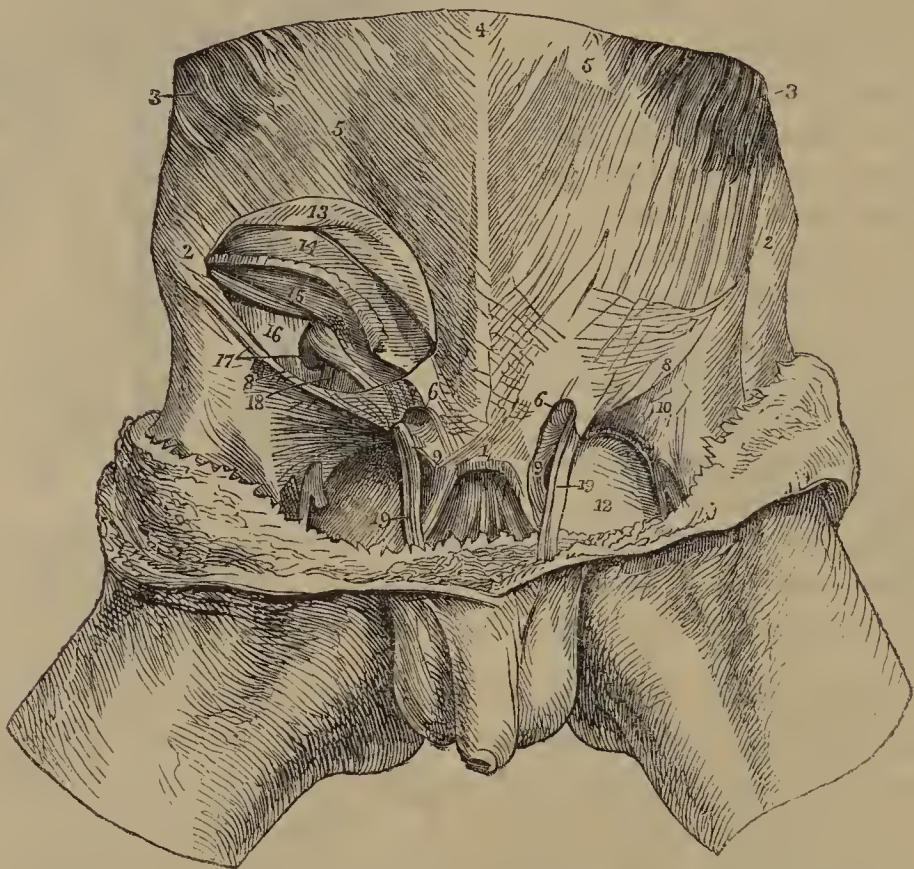
delicate, yet rapid, powerful, yet enduring, often instinctive, and, as it were, without our thought or cognizance, yet are all these muscles voluntary, and wonderfully capable of education and improvement, so as to become, not only the principal agents in most of the physical acts of life, defensive or offensive, but also the immediate instrument in the production of every work of art, thereby, in a great measure, portraying the feelings of the mind, and the powers of the intellect. The large supply of blood-vessels and nerves, imparting the highest sensibility, and the most exquisite delicacy of tact and feeling, and these properties, too, residing in a part necessarily, and almost constantly, exposed to violence or injury; these, and many other circumstances connected with the organization and the functions of the hand, are eminently calculated to excite our curiosity, and, when fully and properly investigated, cannot fail to ensure admiration and respect."



Dr. Harrison's description of the surgical anatomy of inguinal and femoral hernia is the most lucid and complete that we have ever met with. As its length prevents our entering fully into its details, we select that portion of it which treats of direct inguinal hernia, to shew the manner in which the author draws sound practical inferences from anatomical facts:

"*Direct, or ventro-inguinal hernia*, protrudes directly through the external ring, without descending along the spermatic channel. The occurrence of this species is in a great degree guarded against by the fascia transversalis, and by the expansion of the tendon of the transverse muscle, also by the conjoined tendons which lie immediately behind the external ring; the contracted form of the base of this opening, together with the intercolumnar fascia, the edge of the rectus, the triangular ligament, and the spermatic cord, may be all enumerated as additional protections to this part of the abdomen. In this species of hernia, the sac will be found covered by the integuments, superficial and intercolumnar fasciæ, also by an aponeurosis derived from the conjoined tendons, and from the fascia transversalis, which the tumour has pushed before it, though in some instances

the latter has been found to have burst through these structures; the sac will be also covered by the usual cellular capsule; it is not covered by the cremaster, and in general it descends along the inner and anterior side of the cord, that is, the cord will be found external and inferior or posterior to it, but in some few cases the cord has been found passing across the neck of the sac, that is, anterior to it; the sac is seldom or never, however, found between the cremaster muscle and the spermatic vessels, except occasionally, in one particular form, of which I shall speak directly. The epigastric vessels lie to the iliac, or outer side of the neck of the sac; in dividing the latter, therefore, in case this operation be required during life, the

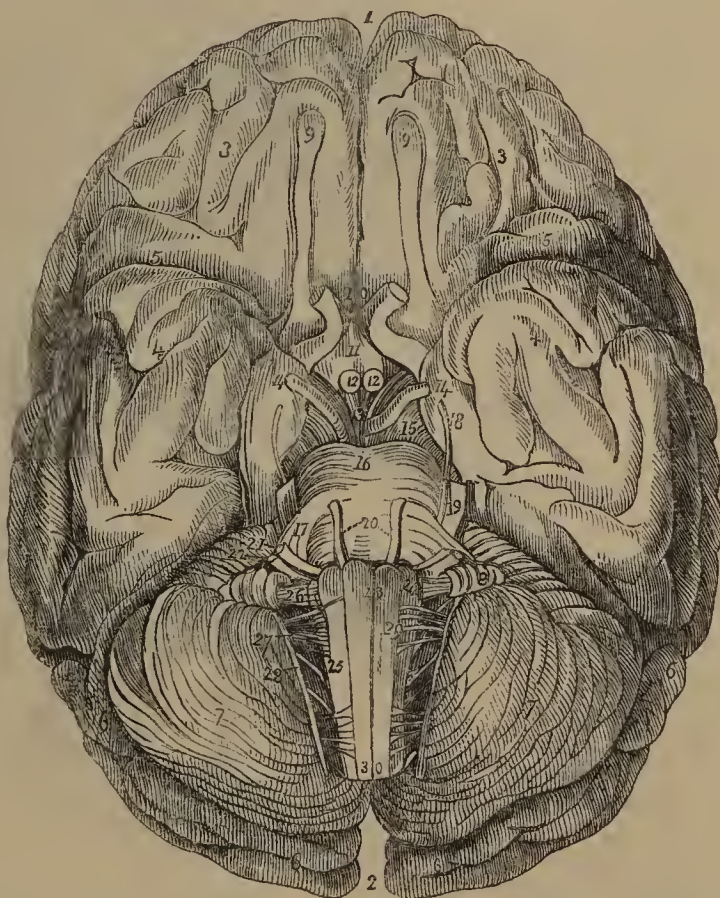


edge of the knife should be directed upwards, or upwards and inwards. It is safer, as a general rule, to divide the stricture directly upwards in all forms of inguinal hernia, because it is often extremely difficult, and in some cases even impossible, to determine, during an operation, the exact species of the disease; thus when an oblique inguinal hernia has continued for a considerable length of time, the spermatic canal will be found altered in many respects from its natural condition; it will have become dilated and shortened, and the abdominal rings expanded and approximated, so as to render it difficult to distinguish it from a direct inguinal hernia; and again, the direct hernia sometimes protrudes more externally, that is, close to the pubic side of the epigastric vein and artery, in which case the tumour may be delayed for some time in the canal, and must descend with some obliquity to reach the external ring."

A considerable portion of the second volume is occupied by the chapters on the anatomy of the nervous system. This is by far the most important and highly-finished section of the work, and bears evident marks of long anatomical experience, deep thought, and laborious research. To those who are imbued with the doctrines of phrenology we strongly recommend a careful perusal of Dr. Harrison's arguments on this subject.

After having accurately described the general and distinctive characters of the convolutions in man, and in some of the lower animals, he observes:

“A section of either hemisphere clearly displays this convoluted and involuted arrangement of the vesicular or grey neurine, the mechanical effect of which must be threefold: first, to increase the superficial extent of the vesicular or grey lamina; second, to extend that of the pia mater, or vascular nutrient tissue, in the same degree; and third, to enable a greater quantity and number of white or conducting fibres to come in contact with the vesicular matter than could possibly be the case, if the latter, in the confined area of the skull, presented one smooth, uniform expansion, as is the case in the more simple brain of the inferior animals. The physiological design of this formation is a problem still involved in mystery; different opinions are entertained respecting it; some maintain that as the grey neurine is the most highly organized portion of the nervous system, it is the most influential in the function of innervation—that it is, in fact, the principal dynamic agent in this function, and that the greater the extent of this substance, *cæteris paribus*, the greater will be the capability of manifesting nervous power. Now this convoluted arrangement of this material has the obvious effect of collecting into a small space a great superficial extent, whereby the greatest possible number of white fibres are brought into contact and communication with it. Others who maintain the analogy between the phenomena of electricity and those of the nervous system, consider that, as the electric force is proportioned, not to the quantity of the



mass concerned in its production, but rather to the extent of its surface, so the energy of nervous action will be in proportion to the superficial extent of the grey or dynamic neurine, and to the number of connecting points between it and the white, or the conducting fibres. It is very generally believed, and certainly with great reason, that, as the convolutions and the hemispheres are more highly developed in man than in any other animal, his mental and intellectual superiority is connected with their existence; that, in fact, the convoluted surface of cerebral grey neurine is the seat of intellectual action. This opinion is confirmed by comparative anatomy, by contrasting this surface in the male and female, in the child, in the adult, and, again, in the very aged, and in different persons whose intellectual powers had been known, and could have been compared during life; also in the idiot, the lunatic, or diseased; also by observing that inflammation of the surface, or of its vascular membrane, disturbs all mental operations, and even induces delirium. This opinion is carried still further by the phrenological school, whose supporters insist on two distinct propositions: first, that there exists a plurality of mental functions, or certain distinct fundamental faculties, moral feelings, and propensities; and secondly, that the



cerebral convolutions are the organs or material instruments by which those functions are performed; and they accordingly mark upon the skull numbers corresponding to certain convolutions or

mental organs within. The first proposition is purely metaphysical, and may or may not be true; its consideration does not fall within our province: the second rests not merely on the universally admitted opinion, that the convoluted surface is the seat of intellectual operation, but mainly on the frequently observed and very remarkable coincidences between certain high mental manifestations, and great development of the corresponding convolutions. To this theory it has been objected, first, that not only is the grey neurine one continuous and unbroken surface, without any structural distinction or division between its various eminences and depressions, but the white fibres also appear combined into one uniform mass; secondly, that several convolutions are not recognised, though in point of size, and uniformity of existence, they would appear superior to those which have been stamped with numbers, for example, the 'ourlet,' the 'Sylvian,' the convolutions of Reil, and many at the base; thirdly, that the apparent fulness or obvious prominence of some eminences may depend, not on any superior development in them, but rather on a protrusion of others which are contiguous or deeper seated; thus a highly developed 'ourlet' might account for an elevation of the vertical and parietal convolutions, &c., &c.; fourthly, no precise function can be assigned to the involuted or depressed convolutions; whereas, if the dynamic power of the whole organ, or of individual portions, be in a ratio to the superficies of the grey lamina, then this series of involutions, or depressed convolutions, must be equal in function and importance to the convex eminences, inasmuch as the combined area of the former exceed that of the latter. Neither are convolutions and involutions always in the same ratio; the latter may be deep, and even expanded below, when the convolutions are by no means prominent, and *vice versa*. Therefore, mere inspection of the convex surface of the cerebrum cannot enable us to judge of the superficial extent of the grey or vesicular lamina. We may see a large brain, with full and well-developed convolutions, but with shallow involutions; and, on the other hand, we may see a small brain, with moderately developed convolutions, but deeply prolonged involutions; in the latter case we shall probably have an equal extent of superficial area of vesicular neurine, and therefore, an equally dynamic organ and energetic brain as in the former, all other conditions as to temperament, health, &c., being supposed equal. Fifthly, in the fully formed skull, the internal surface of the bones is marked by depressions which correspond to the convolutions, and by intervening ridges or prominences corresponding to the sulci; so that from an internal mould of the cranium a very accurate representation of all the surface of the cerebrum may be taken, except the inferior portion of the occipital lobes which rest on the tentorium. At the base of the cranium the bony ridges are more prominent, but in the superior regions the depressions are more developed, and the intervening lines are softer and less projecting. On account of the frontal sinuses, and of the diploe, the external surface of the skull does not by any

means exactly represent the internal, but is more smooth and even, and never accurately presents eminences and depressions inversely corresponding to those within. To some extent, however, and only to some, does the external surface of the bones indicate the projections on the surface of the brain; when a certain portion of the latter, or a certain group of convolutions, are very prominent, the skull in that region will be prominent also, and *vice versâ*; but we very seldom find distinct external elevations corresponding to individual convolutions."

The organs of the senses, being the instruments or media whereby man obtains all his knowledge of the physical characters, and of the general and particular properties of surrounding objects, have received a degree of attention proportionate to their importance in the human economy. To the chapters on the Skin, the Ear, and the Eye, we would particularly direct the notice of the reader, as those in which the author has been most successful in condensing into a small space the greatest amount of information on the descriptive anatomy, structure, and physiology of each respective organ.

Under the head of the anatomy of the eye are included the descriptions of the globe or visual instrument; of the orbits, supercilia, palpebræ, cilia, conjunctiva, lachrymal apparatus, orbital muscles, nerves, and vessels.

A careful analysis of the actions of the orbital muscles in producing the varied motions of the eye-ball, and a correct description of the *ocular fascia*, or *tunica vaginalis oculi*,

will be found amongst the most useful additions to this article.

It is unnecessary for us to go further into the merits of the volumes before us; the passages we have cited are sufficient to prove that the author's aim is not only to present an exact and minute description of the various components of the human body, but also, and chiefly, to elevate and enlarge the views of the student, by leading him to extend the range of his anatomical pursuits beyond the mere mechanical art of dissection.

In preparing the present edition of the Dublin Dissector



for publication, Dr. Harrison has conferred no ordinary boon on the junior members of the profession. The great number and variety of the subjects elucidated,—comprising the most important details in human anatomy, physiology, and pathology,—the practical excellence of its arrangement; the accuracy of its descriptions and illustrations; and the clearness and conciseness of its style, place it far above all other competitors in its own peculiar department. On comparing it with works of similar object, which have, of late years, issued from the Press of Great Britain and America,—some of which are of great merit, and beautifully illustrated,—we have no hesitation in recording our opinion that, as a faithful guide to the pupil in the dissecting-room, as well as an admirable system of anatomy for reference in the study, it has no rival in any language.

In the preface the author acknowledges his obligations to his demonstrators, Drs. Hatchell and King; and in particular to Dr. John Hill, for his “selection, arrangement, and descriptions of the wood-cuts.”

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1. *Copy of Reports on Sir William Burnett's Disinfecting Fluid.* (Ordered by the House of Commons to be printed, 20th July, 1847).
 2. *Sir William Burnett's Patent for the Preservation of Timber, Canvas, Cordage, Cotton, Woollen, &c., from Dry Rot, Mildew, Moth, and Decay.* April, 1847. pp. 43.
 3. *Observations on Professor Calvert's Letter on Chloride of Zinc as a Disinfecting Agent.* By WILLIAM GLASS, Associate of the Chemical Society of London.

A FEW days after we wrote the notice in our last Number of Messrs. Ledoyen and Calvert's delusive production, “printed by order of the House of Commons,” we happened to meet with the first of the pamphlets at the head of this article. Notwithstanding the known character of Sir William Burnett, we were led to fear that something had happened. It is a suspicious thing for even the best of men to be seen contending with a notorious character; there is an old adage respecting the impropriety of fighting with a sweep, and we dreaded that Sir William Burnett had got into a predicament equally infelicitous. Upon a careful examination of the document, however, we found cause to lead us to a more correct appreciation of Sir William Burnett's conduct; and after reading over the other pamphlets on the subject, we were drawn to the conclu-

sion that any collision which may have occurred between him, on the one hand, and Calvert and Co. on the other, was simply defensive on his part. Moreover, we feel that Sir William has really made a discovery of very great importance in the arts; and it is to this part of the subject that we shall draw the attention of our readers.

Many antiseptic agents have been proposed from time to time, for the purpose of preserving animal and vegetable substances from putrefaction, or, what comes to the same thing, from parasites; for it is notorious, that the greater number of insects and fungi will only incubate or germinate on organic matter in a state of decay. The employment of these agents has, for the most part, been abandoned after a time, in consequence of their possessing some property or other which renders their use objectionable. Thus wood impregnated with corrosive sublimate is known to resist the growth of the fungus which occasions dry rot, but the deleterious influence of the vapour of this poison on the health of those exposed to it, soon caused this substance to be abandoned. Other metallic salts have been used for a like purpose, such as sulphate of iron, alum, &c.; but these salts, being crystallizable, are apt to effloresce on the surface of the wood or other material impregnated with them, and this circumstance renders their employment objectionable in many cases. Chlorine, if condensed into the interstices of a porous organic substance, is apt by its chemical action to produce an injurious alteration in the chemical composition of the material; and it, as well as most of the other agents alluded to, if used for the preservation of subjects for dissection, corrode the knives and other metallic instruments employed.

Now, Sir William Burnett has discovered that chloride of zinc is as powerfully antiseptic, if not more so, than any of the agents enumerated, while it does not possess any of their disadvantages. It does not produce any poisonous vapours, like corrosive sublimate; being deliquescent, and with difficulty crystallizable, it is not apt to effloresce on the surfaces of bodies imbued with it, like the more crystallizable salts; and it does not corrode metallic substances. As an antiseptic, it would, therefore, appear to be superior to all other known agents. We shall produce some of the evidence in favour of the foregoing facts. Professor Graham, of University College, says:

“ The wood appears to be fully and deeply penetrated by the metallic salt: I have found it in the centre of a large prepared paving block. The salt, although very soluble, does not leave the wood

easily when exposed to the weather, or buried in dry or damp earth. It does not come to the surface of the wood by efflorescence like the crystallizable salts. I have no doubt, indeed, that the greater part of the salt will remain in the wood for years, when employed for railway sleepers or such purposes. This may be of material consequence when the wood is exposed to the attacks of insects, such as the white ant in India, which, I believe, would be repelled by the poisonous salt. After being long macerated in cold water, *or even in boiled water*, thin chips of the prepared wood *retain a sensible quantity of the oxide of zinc*; which I confirmed by Mr. Toplis's test, and observing that the wood can be permanently dyed from being charged with a metallic mordant."

The following is an extract from a report by M. Mangin, an officer of Engineers, who was commissioned by the French Government to examine the merits of Sir William Burnett's invention:

" This process consists in introducing into the wood, by means of great pressure, a solution of chloride of zinc, and in replacing as much as possible the sap by this solution.

" I have seen some slender plank and some pieces of canvas, which, after having been submitted to the preparation, had been placed during many months upon the soil of a very damp pit, by the side of others of the same dimensions, obtained from the same plank, and some other pieces of canvas cut from the same piece, which had not been prepared. The first were perfectly sound; the second shewed evident traces of deterioration. Some parts were even completely rotten. The intimate contact of a rotten piece has not any effect upon the prepared piece, as has been proved to me by the result of an experiment to this effect, by the principal surgeon of the arsenal at Portsmouth."

The resistance to dry rot exhibited by wood prepared according to Sir William Burnett's process is very remarkable. Thus, at Haslar Hospital, the wood of a water-closet became attacked with dry rot; Mr. Baker, the Inspector of Works, ordered it to be replaced partly by ordinary wood, and partly by wood impregnated with chloride of zinc; this occurred in 1836, and, in 1843, he reports that all the former had become rotten, while the latter was as sound as at first.

In another experiment, made in the cellar of a house in Chatham dock-yard (where the flooring had been repeatedly destroyed by dry rot, and where large fungi were then growing), a quantity of " Burnettized" deals were put down, together with other pieces of the same wood unprepared, in the latter part of the year 1838. When examined in the spring of the year 1842, all the unprepared wood had become com-

pletely rotten, whilst that which was "Burnettized" was perfectly sound and clean.

Besides incorruptibility, another advantage which results from Sir William Burnett's process is, that the wood becomes much less inflammable. The following is an official testimony to this property:

SIR,—My Lords Commissioners of the Admiralty having caused experiments to be made to test the incombustibility of woods, when saturated in your solution, I am commanded by their Lordships to acquaint you, that it has been ascertained that the soft woods, such as yellow pine and other deals, both foreign and English, saturated in solution prepared in certain proportions, when exposed to the immediate contact of iron heated to a blood-red heat, did not ignite into a flame, whereas unprepared wood of the same kind burst into flame immediately. The same effects, however, are not produced in the same degree by the same process upon the hard woods.

"I am, Sir, your most humble Servant,

" JOHN BARROW.

" *Sir William Burnett, K. C. H.*"

In consequence of its being proved that soft woods become much less inflammable by being "Burnettized," the Lords of the Admiralty have directed the bulkheads in the holds and magazines of Her Majesty's ships to be fitted with timber so prepared; and Lord Stanley, when Secretary for the Colonies, recommended the local government at Quebec to avail itself of Sir William Burnett's discovery, in the application of the sum granted by Parliament for the relief of the sufferers by the extensive fires which occurred in that city in 1845.

A most important consequence of this discovery is, that soft timber of an inferior description can be made equal to the hardest and most seasoned. Thus, Mr. Bury, of Tullamore, in the King's County, finds that *domestic timber* (birch, elm, and Scotch fir), when "Burnettized," answers as well for the building and repair of canal boats, as the best *Memel timber*. Mr. Clarke, of Southamptonshire, used inch boards of elm, sawn up immediately upon being felled, for supporting the rich earth of a melon and cucumber bed. This bed was constructed upon what is called by gardeners the "Tank System," that is, the bed is kept warm by steam urged against the wooden bottom. Some of the boards were saturated with the chloride of zinc; the remainder were not. After being some months in action,

"The unprepared wood was permeated by the spawn of terrestrial fungi, which were growing on the under side; they had also given way in the centre, so much so as to endanger the slate-covered

tank beneath. The prepared boards were perfectly *straight*, sound, and unaltered."

The antiseptic effect of chloride of zinc, appears to be as well proved, as regards animal substances, as it is with wood, rope, and canvas. Mr. Bowman says, that, in preserving subjects for dissection,

"It preserves the colour and texture of the parts very admirably. It has the further very important advantage of not acting on the steel instruments employed, being, in this respect, equal to alcohol."

Mr. Sharpey alleges that,

"The liquor not only prevents the access of putrefaction, but corrects its effects, and arrests its further progress when employed after the process has commenced."

Mr. Partridge, of King's College, says:

"No body is now dissected at King's College, which has not been previously prepared by injecting your antiseptic into the arteries; and this preliminary proceeding is *not found to interfere* with the subsequent *success* of the ordinary *paint injection*, which should be thrown in on the following day. As the parts become exposed in the progress of dissection, it is useful to moisten them with a little of the solution by means of a soft sponge, and the hollow viscera should be *washed out* with the solution by the aid of a syringe. By these measures the different structures of the body are fully and distinctly preserved; the muscles, however, become paler, and, perhaps, a little more fragile than natural, but remain quite distinct."

These testimonials appear to be satisfactory. We have no personal knowledge of the result of trials made with the chloride of zinc in Dublin; but we understand that such have been made. We think those who have used it ought to publish their experience. Sir James Murray is the only witness from Dublin brought forward by Sir William Burnett, and the selection is certainly infelicitous. Without meaning the slightest disrespect to Sir James, we must acknowledge that the testimony of any lecturer on anatomy, demonstrator, or even student, would have more weight with us than his. His duties as Inspector of Anatomy do not, we should think, afford him the requisite opportunities for arriving at a satisfactory conclusion; and we should much prefer that the officers of the anatomical schools, in which he states the preserving liquor has been used under his inspection, should themselves come forward, than that we should be forced to receive their evidence at second hand.

The efficacy of chloride of zinc in destroying the offensive odour of bilge water in ships, is a fact now notorious. It is employed on board Her Majesty's yacht, Victoria and Albert, for this purpose, with the best results. The Eclair was sweetened by its means; and, in fact, it is now becoming extensively employed in the navy with this intention. The action is simply chemical; the hydrosulphuret of ammonia, which is the cause of the odour of bilge water, being decomposed by the chloride of zinc, with the formation of muriate of ammonia and sulphuret of zinc.

Having made discoveries of so great importance, we advise Sir William Burnett to remain contented, and not to permit himself to be drawn into a controversy which cannot terminate in either honour or profit. He has ascertained that the chloride is a powerful antiseptic, preserving wood, textile fabrics, and subjects for dissection, to a very surprising degree, without any of the inconveniences to which other antiseptics are liable; he has ascertained also that this salt renders porous organic bodies less inflammable; and that, moreover, soft green woods of domestic growth may be substituted, by its means, for expensive foreign timber. These are facts of very great consequence. Add to these, that chloride of zinc is capable of removing the disgusting odour of sulphuretted hydrogen, which is so apt to be liberated during the process of putrefaction, and we think that Sir William Burnett deserves the thanks not only of the navy, over whose medical department he has so long and so ably presided, but also of the nation. We do not quarrel with his having made his discoveries the subject of a patent; he was perfectly justified in acquiring a pecuniary interest in the profits of his own inventions. But let him avoid "*disinfecting*" night-soil, and the wards of hospitals; let him permit the potatoes to recover naturally without any curative manure; let him, in a word, carefully eschew Colonel Calvert's ways.

PART III.

REPORTS, RETROSPECTS, AND SCIENTIFIC INTELLIGENCE.

MEDICAL MISCELLANY.

A Case of Encephaloid Disease producing Amaurosis. By JOHN DALRYMPLE, F. R. C. S. E., Surgeon to the Royal Ophthalmic Hospital, Moorfields.

[Read before the Fellows of the Royal Medico-Chirurgical Society of London.]

IN laying before the profession a sketch of a very interesting case of cerebral amaurosis, I may be permitted to remark, that there are few diseases in which the diagnosis of remote causes is more difficult than in amaurosis, none in which the treatment, from the obscurity that often prevails as to the true nature of the lesion, is confessedly so unsatisfactory.

Amaurosis may depend upon a great variety of causes, and may arise from error of function, or from vice or lesion of structure.

Functional amaurosis sometimes occurs from the irritation of worms, sympathy with uterine disturbances, difficult dentition in infants, and even from carious teeth in adults. I have seen a case of nearly total blindness almost immediately removed by the expulsion of a tape-worm.

Exhaustion of the system from loss of blood, continued discharges of whatever kind,—in fact, the anæmial condition,—either deficiency in quantity or defect in the quality of the blood, may produce entire loss of sight. In a degree this is seen when a person is bled to syncope, dimness and even total darkness preceding the fainting. I have now under my care a young girl in whom complete amaurosis arose from the exhaustion succeeding hypercatharsis. In this instance all the external marks of the functional disease were present,—the dilated and motionless pupil, the glassy and uncertain stare, the bloodless and lustrous eye,—the very type of perfect amaurosis. It commenced in jaundice, was over-treated, and resulted in blindness in about six weeks.

In this form of the disease the simple absence of blood necessary to the maintenance of the functions of all our organs, sufficed to extinguish the sensibility of the delicate retina.

On the other hand, congestive amaurosis, amongst the most common examples of impaired vision, preceded by a totally different train of symptoms, may exist equally in persons of weak fibre and deficient heart's action, as in the strong, plethoric, over-excited state of the system.

Both the anæmial and congestive or hyperæmic amaurosis may, under prosperous circumstances, be cured without any organic change or structural lesion resulting.

Blindness may, however, depend upon structural diseases within the eye,—upon causes within the orbit, but external to the globe,—or from lesions within the cranial cavity. Where the amaurosis depends upon disease within the eye, it may be said to be consecutive rather than original,—the result of inflammatory action, acute or chronic. Thus retinitis, choroiditis, or the extension of iritis to the posterior tissues, are amongst the most common causes of ocular amaurosis; but in these cases the diagnosis is comparatively simple, from evidence of pre-existing inflammatory action being almost always to be recognised.

Blindness from causes operating within the orbit, but exterior to the globe, results usually from some pressure upon the eye or optic nerve, as from chronic abscess in the cellular tissue, periostitis, tumour,—malignant or otherwise,—or extensive effusions of blood, the result of direct injury. In these cases also, from a protrusion or misdirection of the eye, and a variety of other physical signs, the diagnosis is readily made.

The same facility in recognising causes does not exist in cerebral amaurosis, for while sometimes paralytic symptoms, strabismus, loss of sensibility of the skin of the face, hemiplegia, and the like, may indicate disease of the brain, the true nature of such malady is often most difficult to discover. It is frequently by subjective symptoms alone we can arrive at the truth; the eye itself may be healthy, and the iris often not even paralysed; I have frequently seen complete amaurosis in both eyes, with undilated pupils, with pupils even contracting upon exposure to light, though these cases are comparatively rare. Nevertheless, there are often cases of entire blindness with almost total absence of symptoms, cerebral as well as ocular, and I need not say such are peculiarly embarrassing, as well as nearly always hopeless.

The absence of subjective as well as objective symptoms leads to the suspicion of cerebral mischief. In the anæmial or hyperæmic amaurosis, general signs sufficient to direct our practice manifest themselves. Ocular blindness exhibits evidence of present or foregone structural lesion; but the greater obscurity of the different forms of disease of the brain, inducing amaurosis, necessitate the closest scrutiny in order to arrive at an even moderately precise diagnosis.

In those cases where the blindness depends upon causes altoge-

ther external to the cranial cavity, we may find, upon inquiry, that the patient sees *objects in his dreams*. So vivid and so real are the appearances presented to his mind's eye in his sleep, that waking to entire darkness is an additional source of distress to him. In such a case the parts of the brain which preside over the functions of vision,—the organs where the impressions on the retina, conveyed by the optic nerves brain-ward, *become perceptions*,—would be in a still healthy condition; for it is scarcely probable, that, if disease involved the corpora quadrigemina and geniculata, this exercise of their functions, deceptive though it be, would or could take place. We, therefore, should be led to infer, that if the amaurotic patient was found to complain of these vivid phantoms in his sleep, at least the central organs of vision were impaired, or that, if cerebral disease existed at all, it would be found to be some growth or pressure at the base of the brain, influencing the optic tracts or the chiasma itself. At best, however, I must admit this to be a rather speculative idea, which has not been traced in a sufficient number of cases to lead to any certain conclusion.

The case I propose to relate exposes such extensive disease of the brain, and was attended with so few of what are called cerebral symptoms, as to prove what I have already said of the extreme obscurity of the diagnosis, and hence a corresponding vagueness in determining the methods of treatment.

Case of Encephaloid Disease of the Brain inducing Amaurosis.—Miss B., a lady of colour, born in the East Indies, consulted me first in September, 1843, on account of nearly complete amaurosis in both eyes. Her age at that time was about 24.

The following is a short and imperfect history of her case:—About three years previously (in 1840) she had an attack of measles, the symptoms of which appear to have been very grave, for it was attended with signs of cerebral inflammation, delirium, strabismus, and dimness of vision. Her recovery was slow, though, at length, apparently complete. Her present blindness, therefore, she only dates from about nine months previous to her consulting me. She described it as commencing with dimness, rapidly increasing within the last three months up to the present time, when there is scarcely more than a perception of dark objects between her and the light. The pupils in either eye are not more than semi-dilated, and shew a slight greyish tint; the irides, though not motionless, are extremely sluggish; the vision of the left eye is extinct, but its iris acts in accordance with the right one, when exposed to extreme variations of light and shade. The axes of the two eyes do not correspond, and the left one has a slight external direction, not positively strabismus divergens, but giving a peculiar expression to the countenance.

The globes are slightly prominent, and, though at a first glance one would perceive that the patient was blind, yet, owing to the little dilatation of the pupils, there is not that glassy amaurotic stare so remarkable in the generality of persons labouring under cerebral blindness. There are no traces of congestion of the globes,

or of precedent inflammatory action of the internal tunics of the eye.

There is little general headach, but frequent neuralgia of the occipital nerves, which appears to be paroxysmal; but in the intervals of severe pain there is more or less dull aching at the back part of the head. The more acute suffering is attended with nausea, occasional sickness, and faintness.

Miss B. complains also of spasms of the muscles, and partial numbness of the skin of the right side of the face: also of occasional jerking of the muscles of the right arm. She can lie with the head low, and thinks the neuralgic pains alleviated by that position; is giddy on first rising; sees worse for the first half-hour on getting up in the morning, better subsequently, but worse again whenever fatigued or depressed.

The circulation is very feeble; the heart palpitates on slight exertion; pulse low, quick, but regular; the catamenia appear every three weeks: she suffers somewhat from dyspepsia.

This case has been under treatment for several months; and the view that appears to have been generally taken of it is, that it is a form of hysterical amaurosis, more or less connected with an anæmial condition, and uterine disturbance.

I first saw this lady at the request of Dr. M. Hall, whose opinion coincided with my own, that the amaurosis depended upon some organic lesion of the brain,—led to this conclusion by the obscure paralytic symptoms, the numbness of the face, the muscular spasms, the neuralgic pains, and persistent headach, always referred to the same region.

It is desirable to remark in the history of this case, especially in connexion with some parts of the subsequent treatment to which Miss B. submitted herself, that she was a person of strong good sense, placid disposition, and little disposed to purely nervous or hysterical exhibitions. She never evinced impatience or irritability, and bore her misfortune with singular fortitude and composure.

Acting upon the presumption that there might have been some chronic inflammatory action at the base of the brain, traceable to the meningeal inflammation, delirium, &c., which accompanied the attack of measles three years previously, it was advised that Miss B. should be put upon a mild but sustained mercurial course, with the most guarded attention to dietetics and general hygienic rules.

Shortly after commencing this plan, she went into the country, and there followed out her treatment; but, whether from accidental causes, or peculiarity of constitution, the mercurial action was rapidly set up and ran into severe salivation, whereby she was considerably reduced in power, and returned to town after several weeks, with her vision, if possible, in a worse condition than before.

Nevertheless, the more grave cerebral symptoms had disappeared; she had wholly lost the neuralgic pains and muscular spasms, and had recovered the sensibility of the skin of the face, while the feeling of sickness and nausea had, in a great measure, left her.

It would be uninteresting, and without instruction, to detail treatment carried over a term of nearly four years, with little influence on the disease. I will, therefore, merely sketch the further history of this case.

After her recovery from the effects of the first mercurial course, she persevered in the use of alterative doses of the mineral for some months, sustained by gentle tonics, and relieved from occasional attacks of increased cerebral congestion, by the application of leeches, or small cuppings from time to time. The amaurosis was soon perceived to be irremediable; and, her general health being much restored, systematic medicinal treatment was at length abandoned.

By the advice of friends, however, Miss B. occasionally consulted other physicians, and had various opinions offered to her, as to the causes and nature of her malady. At one time she was informed that the blindness depended upon the non-evolution of the two upper wisdom teeth, she was advised to consult a dentist, and have the two wanting teeth sought for, cut down upon, and extracted from the alveoli, where they were possibly concealed.

For some weeks she was under mesmeric treatment, without, I need not add, any benefit, but without her experiencing any of those occasional phenomena exhibited in persons of nervous temperament, excitable imagination, or weak reasoning faculties. Probably her blindness itself saved her from any exhibition that might have encouraged a persistence in this delusive treatment.

In the early part of 1846 Miss B. had a recurrence of the faintness, as she expressed herself, which came on nearly every day at irregular periods, and had some resemblance to an epileptic aura. She would complain of creeping sensations ascending towards the pit of the stomach, attended with a sense of faintness, and would probably have fallen, had she not, on first perceiving the approach of the fit, laid herself down on the sofa. If seized while walking, she would stop and rest upon the attendant's arm, for a few minutes, until the feeling passed away. Sometimes these attacks would occur in bed, at other times, when at table at meals; but they seldom lasted above a few minutes, and left her little the worse for the seizure. On one occasion she appears to have lost her consciousness entirely, while at Dr. Hall's house; but this was, in all probability, a real syncope produced by fatigue in walking. Towards the middle of last year Miss B. suffered somewhat more from headach, still referred to the back of the head, and more or less to the right side, behind the ear.

About the first week in February, 1847, this lady complained of being more than usually unwell, but attributed her discomfort to a bilious attack, for which she took a mercurial aperient, but was not sufficiently ill to excite uneasiness. On Sunday, the 7th of February, she was up, and cheerful as usual, but at night was restless and uneasy, although it appears she passed the night without complaint. On the morning of the 8th she did not rise to breakfast, and appeared somewhat unconscious of what was passing; still she answered questions correctly, and partook of some breakfast as usual. About

10 o'clock, A. M., her attendant observed her to become more faint, and, being alarmed, sent for her usual medical friend. Probably scarcely twenty minutes had elapsed before he arrived, but Miss B. was already dead. No convulsion had occurred, no sound escaped her; in fact, the actual moment of dissolution was not observed, so tranquilly had she passed away.

During the greater part of the time this lady was under treatment, she resided in the house of a medical friend, Mr. Burford, of Hamilton-terrace, St. John's Wood. She was seen many times by Dr. M. Hall and myself; and if I have been concise as to the different medicines employed, or course of treatment that had been recommended, it is because nothing availed to arrest the progress of the formidable disease which the *post mortem* examination revealed to us. It is, however, not too much to say, that life had been prolonged, and incidental suffering greatly alleviated and prevented, by the unremitting care and attention paid to all parts of the treatment by Mr. Burford, and by the opportune arrest of occasional disturbance of the cerebral circulation, which her residence in the house of a medical gentleman so fortunately permitted.

Twenty-six hours after death an examination of the head took place, in the presence of Dr. Marshall Hall, Mr. Burford, and myself.

It was observed that the scalp over the occipital region was unusually thick, condensed, and congested. The calvarium was normal in all respects; and on its removal the dura mater presented no morbid appearances. There was little congestion of the pia mater, and the arachnoid of the superior surface of the brain was transparent and healthy. The convolutions of the upper and middle part of the right hemisphere *were flattened*. On making the usual sections to expose the lateral ventricles, it was observed on the right side, that a considerable bulging of the white matter took place, leading to the impression that the cavities would be opened unusually early, from being distended with fluid. On a puncture being made, about an ounce and a half of clear serum escaped from the anterior horn of the right lateral ventricle, and upon splitting up its roof, it appeared as if the serous fluid had been contained in an isolated cavity, in which was seen the prominent anterior extremity of the corpus striatum. Immediately behind the anterior third of this ventricle, its cavity was nearly closed by the pressure of a tumour exterior to its walls, deeply situated in the white matter of the middle lobe of the right hemisphere. Behind this point again, the posterior cornu was dilated and contained fluid. The plexus choroidis passed down the descending cornu, but its walls were pressed so closely together by the tumour, that a probe could scarcely be insinuated between. The septum of the ventricles on this side was greatly thickened, and under its serous covering a deposit of soft fungoid matter was perceived.

The left ventricle, as well, indeed, as the whole of this left hemisphere, was normal.

The brain was now removed, and placed with its base upwards.

The first point that struck our attention was a large, reddish, pulpy tumour, that extended from the junction of the optic nerves, to the pons Varolii, overlapping to a slight extent, on the right side, this transverse band of white matter.

The optic nerves were, at their section within the cranium, diminished nearly one-half in size, of a greyish yellow colour, soft and homogeneous, the fine white medullary tubules having vanished. The chiasma was partially involved in the tumour, but the left nerve quickly emerged from it, and could be followed through the optic tract to its termination in the corpora geniculata, corpora quadrigemina, and thalamus, distinguished throughout its course round the left crus cerebri by its yellow grey colour, very unlike the healthy appearance of this nerve. The third, fourth, fifth, and other nerves on *this side* were not implicated. *On the right side* the optic nerve ceased to be traceable brainwards, immediately posterior to the chiasma. The soft, red, fungoid tumour covered the right crus, and passed at once deeply into the substance of the middle lobe of the brain. The third pair of nerves slightly diminished in size, but presenting its usual fibrillated appearance, emerged through the centre of the fungoid mass, imbedded in a little sulcus, and separated by a fine transparent tissue from the tumour itself. Posteriorly the tumour overlapped, slightly, the pons Varolii, and partially the emergence of the fifth pair of nerves on the right side. The sixth pair of nerves, on both sides, were unaffected, and passed under the tumour and free from it. The basilar artery was covered by the growth, but could be separated from it, by raising a fine membranous tissue. The tumour itself was freely supplied with vessels from all points of the circle of Willis.

The pons Varolii, crura cerebelli, and all the nerves originating from the medulla oblongata and cerebellum itself, were healthy.

The fungoid mass at the base was placed principally to the right side of the mesial line, but partially overlapped the left crus cerebri, and entirely concealed the pons perforata, the mammillary bodies, and infundibulum. Exteriorly it passed at once into the inferior portion of the middle lobe on the right side of the brain; then, ascending on the outside of the descending cornu of the ventricle, it embedded itself in the centre of the medullary mass of this hemisphere, compressing the middle of the lateral ventricle, and involving the optic thalamus.

On a section being made through the tumour, its limits were pretty clearly defined by its reddish colour, from the surrounding white matter, and its size equalled that of a hen's egg. Its general aspect, pulpy texture, and the examination subsequently by the microscope, clearly indicated its character as encephaloid fungus, or fungus hæmatodes.

One eye only was minutely examined. There did not appear to be the slightest disease of the intraocular tissues. The retina was as perfect as that of the most healthy organ; not in any degree degenerated, although the optic nerve, from the eye to the optic foramen

of the frontal bone, was sensibly diminished in size, though not altered in colour or character, as were the nerves within the cranium.

Such cases as the one above related, although they teach little, are interesting in proportion as their diagnosis is obscure. It will be observed that, considering the size of the tumour, and the extent of the brain it occupied, the symptoms usually connected with extensive cerebral disease were few and mild.

Complete amaurosis, as we well know, may depend upon an infinity of causes independent of tumour of the brain. The almost entire absence of paralytic symptoms, where so large a portion of cerebral substance was displaced for the lodgment of the tumour, or which had become so far degenerated as to be inadequate to the discharge of its functions (while even a small hæmorrhagic clot in the same position, would, in all probability, have produced hemiplegia), can only be accounted for on the presumption that, from the slow growth of the tumour, the still healthy left side of the brain became accustomed and competent to the discharge of all the duties of volition. All the nerves of special sense, having their separate and isolated centres of communication, had, with the exception of the optic, escaped the contamination of the disease; while the partial numbness of the face, and the occasional muscular spasms, which were arrested and even removed by the mercurial course, led to the belief, that the symptoms had depended, at the earlier periods of the disease, upon chronic inflammation of the membranes, and consequent effusion at the base of the brain.

It may be a question, and not an uninteresting one, whether the first germs of this malignant disease were set up at the period of the attack of measles, accompanied as it was with delirium, strabismus, and dimness of vision;—whether a chronic meningeal inflammation, with subarachnoideal effusion, of an albuminous or more solid nature, subsequently organized and degenerated into malignant disease, had not already taken place at the period when Miss B. first came under my observation. The relief of many pressing symptoms, the recovery of the sensibility of the skin, the abatement of pain, and the absence of muscular spasm, after the salivation, favour the belief that the results of ordinary inflammation yielded to the influence of the mineral; while the depression of the general power, due to the same cause, and probably an alteration of the normal nutrition of the already diseased structures, may have led to or favoured the growth and progress of the more malignant and ultimately fatal malady.

This case, though by no means a rare one, is, I have felt, sufficiently interesting to place upon record, and as such I submit it to the consideration of the readers of the *Dublin Quarterly Journal*.

Case of Extirpation of the Superior Maxilla, for Fibro-Cartilaginous Tumour in the Antrum Maxillare. By EDWARD L. FALLOON, M. R. C. S., Liverpool, late Assistant-Surgeon to the Bengal Volunteers, China Expedition.

THE subject of this operation, Sarah Humphreys, aged 28, from Holywell, Flintshire, states that, four years ago, a small tumour, not larger than a pea, made its appearance on the right cheek, unproduced by any known cause, and unconnected with toothache or decayed stumps; it grew slowly for the first two years, causing hardly any pain, when she applied for advice to some medical men in her own neighbourhood, who extracted a bicuspid and a molar tooth, puncturing the tumour externally at the upper part of the gum, when nothing but blood escaped; an attempt was then made to produce suppuration by poulticing, &c.; since which time it has increased rapidly, till it has attained its present size, viz., that of a large goose egg. It is of firm consistence, communicating at one point an elastic feel; the parietes of the antrum unbroken; skin sound, and not adherent to the tumour; no discharge from the corresponding nostril; no fungoid appearance in the mouth; it is not painful, except when handled; there is slight dilatation of the nostril; and no displacement of the eye, but slight impairment of vision in the



lateral direction(*a*). Some enlarged veins traverse the tumour; three teeth are moveable in its substance; two decayed and discoloured; the patient's constitution is unimpaired, and she enjoys excellent health, but, in consequence of the inconvenience and unsightliness of the tumour, and its rapid increase of late, she has firmly made up her

(*a*) I have to thank my young friend, Mr. Robert Batty, for the accompanying illustrations, the one taken a fortnight before, and the other a month after, the operation.

mind to undergo an operation for its removal. To this request I readily acceded, seeing that the growth was marked by all the characters that distinguish the benign from the malignant class of tumours. The 23rd of July was fixed for the operation, and I sent her to the country for the intervening fortnight, prescribing a quinine and iron mixture, as her countenance was rather chlorotic.

With the approval and in the presence of Mr. Bickersteth, and assisted by Mr. Lewis, I proceeded with the operation as follows. Some morphia was previously administered about 3 o'clock, P. M. She was placed in a strong arm-chair, with the head resting on the breast of an assistant, a second assistant standing at her right side to compress the carotid, if necessary. I commenced by extracting two incisors, and transfixing the integuments with a sharp-pointed bistoury, inserted from the inside; and, piercing the skin high up over the most prominent part of the malar bone, an incision was made down to the commissure of the lips; a second incision, commencing below the inner canthus of the eye, was made downwards, dissecting the ala nasi from its subjacent bone, and dividing the lip in the mesial line. A flap was dissected quickly up, and the conjunctiva and inferior oblique raised from the orbital process; with Heys' saw, the perpendicular plate of the malar bone was then divided, and the horizontal portion, as far as the speno-maxillary fissure, with Liston's bone forceps; then, grooving the palatine arch and preserving the soft palate, the bone was divided from its fellow by placing one claw of the forceps in the nostril, and the other in the groove; in accomplishing which, the claw of the forceps gave way, and having no other at hand to replace them, the nasal process, as well as some bony attachments left undivided towards the speno-maxillary fissure, had to be separated by the saw, thereby very much prolonging the operation, and the consequent sufferings of the patient. The tumour was then depressed, and required great force to detach it, two fingers supporting the palate-bone, so as to separate the superior maxilla at its suture; the external pterygoid and masseter muscles, and mucous membrane, being divided, the tumour dropped out, making a loud noise as it left the socket where it was imbedded under the orbit. The bleeding did not amount to more than a pint in all, although the operation lasted an hour, in consequence of the delay caused by the breaking of an apparently strong pair of forceps. Only one artery in the palatine arch required ligature. I need not attempt to describe the hideous chasm that now remained, for no surgeon can have much difficulty in forming a correct notion of it, when he reflects on what parts were removed. I put a dossil of wet lint into the cavity, and brought down the flap, securing the edges in apposition by four twisted and three interrupted sutures, strips of isinglass plaster, and a fold of wetted lint, over all. Another opiate was administered, and she was placed in bed, having borne the operation with great fortitude, neither her pulse nor her courage having flagged during the whole time.

The entire of the superior maxilla of the right side, and the greater part of the malar bone, were involved in the disease; the tumour was nearly globular, with a convexity at one end, surrounded in its whole extent by a pellicle of bone about the thickness of parchment; towards the inner aspect there was a distinct excrescence enclosed in a sac of its own, and on making a section through the centre of both, they were found to consist of a dense fibro-cartilaginous structure, with spiculæ of bone interspersed. Most of the original bone seems to have been absorbed, and a case made for the tumour by the deposition of new bone.

8, P. M., four hours after operation. No oozing of blood; pulse 100; slight heat of skin; complains of pain and thirst; but had upwards of an hour's sleep, and relished some cold bread and milk.

24th, 10, A. M. Had a good night's rest, feels refreshed, very little pain; pulse 98; tongue loaded. Ordered a purgative draught.

6, P. M. Œdema of the eye-lid, and swelling of the parts; thirst not so urgent; slept some during the day; bowels not moved; had a domestic enema: wetted lint, to be renewed frequently, applied on the cheek.

25th. Much relieved by having the bowels freely moved; passed a good night; some swelling, and painful distention of the jaw, which was much relieved by removing some of the lint from within; breath very foetid. Line of incision healed by first intention over its whole extent.

26th. Slight irritative fever; pulse 110; dry tongue; thirst; pain. Removed more of the lint from within, permitting a free discharge of pus. Ordered a dose of calomel, James's Powder and muriate of morphia, and a chloride of soda wash for the mouth. Removed one of the pins to-day.

27th. Had a good night; tongue moist; pulse 98; wound suppurating freely. Removed the remaining pins and sutures, and applied strips of plaster; also some of the lint inside, but with much difficulty, it having caught on some spicula of bone. Œdema of eye and face gone; can open the former, and see perfectly; is in good spirits; allowed mutton broth.

28th. Improves daily; no pain or swelling; no falling down of the eye; tongue clean and moist; appetite good; bowels open: dresses herself and goes down stairs daily.

29th. Some œdema of lip at external angle, causing it to hang down, making the mouth crooked; a bandage applied over the head to support it: has perfect control over the orbicularis oris; profuse discharge kept up by some lint that still remains.

August 3rd. Goes on very satisfactorily; the remainder of the lint has been brought away with some difficulty; the discharge lessens daily: she has been out of doors, and feels so well as to be able to go to the country for a week.

11th. She presented herself alone to-day, looking well; wound outside perfectly healed; eye and mouth straight; no falling-in of the cheek; a strong band has formed from the commissure of the lip

that hung down, and attached itself to the ala nasi, so that there is hardly any deformity ; the line of incision is very even, and scarcely perceptible ; articulation wonderfully distinct.

19th. Greatly improved ; surface inside granulating ; the cavity filling up ; voice improves ; is stronger and better than she has been for a long time, and is much pleased with her present appearance.

The only remarks I have to make on this case, consist in a caution to practitioners undertaking this operation, to be provided with duplicates of every instrument required, for I shall never forget how awkward I felt when the strong bone forceps gave way.

Cases of Sea Scurvy. By J. MOORE NELIGAN, M. D., Physician to Jervis-street Hospital, &c. Reported by Mr. R. W. EGAN.

THE men, a report of whose cases is appended, were part of the crew of the Russian barque *Secundus*, which sailed from Odessa April 22nd, and arrived in Dublin July 23rd, 1847.

No. 1.—Isaac Grönros, a native of Finland, of low stature but stout built, dark olive complexion, brown eyes and hair, with an expression good-humoured and lively, aged 25 years, was admitted into hospital 26th July, 1847. The disease manifested itself by the following symptoms: great pain and stiffness of the knee, ankle-joint, and hamstring tendons ; his body was studded with livid purple spots, which, when pressed with the finger, communicated a sensation as if a small piece of cartilage were inserted beneath the skin ; these were situated chiefly on the back and shoulders, as also on the instep and fore-part of both legs, which were of a coppery brown hue, painful on pressure, and covered with a thick, scaly coating, much resembling ichthyosis. The left leg appeared by comparison to have wasted considerably ; his gums were swollen, spongy, and inclined to bleed. In other respects his general health appeared good. Subsequent to his admission, it was found that this man had been similarly affected on two previous occasions, but never before so severely as on the present.

On admission he was put on the full diet of the house: bread and milk for breakfast ; twelve ounces boiled fresh beef, with its soup, and a fourth part of a half-quartern loaf, for dinner ; and in addition one pound of potatoes, with one head of boiled cabbage, daily. This diet was continued during his treatment, save on the occasion of an attack of diarrhœa. He was ordered to take half a grain of oxalic acid, dissolved in water, with the addition of a little honey, every six hours.

July 27th. Complained much of the pain in his legs ; directed to have them rubbed with soap liniment.

28th. Somewhat better. Oxalic acid to be continued. To have a warm bath to-night.

August 1st. Considerably improved ; legs much less painful ; the

scaly coating almost disappeared; purple spots much as before, but the coppery discoloration visibly fading.

2nd. Some lime-juice having been procured, the oxalic acid was omitted, and the following mixture substituted: lime-juice and treacle, of each, an ounce; water, eight ounces; an ounce to be taken three or four times a day.

3rd. Still improving; expressed himself to his captain as quite well; joints not so painful; he can now walk with comparative ease.

From the last date he continued to improve, with the exception of a smart attack of diarrhœa which lasted for three days, and was followed by copious bleeding from internal piles. On the 12th inst. he was quite well; his joints free from either pain or stiffness; the discoloration had also completely disappeared; the gums were firm and natural in appearance; and he was altogether in perfect health. He left the hospital to join his ship.

No. 2.—Bernard Sandberg, aged 26, dark complexion, black hair, and of rather a sinister expression of countenance, admitted the 26th of July, 1847. The symptoms of this case were of much the same character as the last described, except that articular pain and rigidity were not so great. It, however, presented another feature of the disease, viz., fungous ulcers growing from each leg; these growths were raised half an inch from the surface, covered with a dirty brown crust, and discharging a most foetid sanies: in size they varied from that of a crown-piece to that of a shilling, and were exquisitely sensible. This man was put under the same treatment as the former.

30th. Ordered a carrot poultice to the ulcers on the legs.

August 1st. The crust has come away from the legs; the exposed surface is of a bright scarlet colour and honey-comb appearance.

2nd. To have the lime-juice mixture. A warm bath at bed-time.

4th. The discoloration on the legs and insteps is disappearing; the ulcers on the legs are looking healthy, and much diminished in size.

8th. The spots and discoloration before alluded to have quite disappeared; the gums are firm, and have not bled since a few days after admission; the ulcers continue to improve. A linseed cataplasm, wet with pure lime-juice, was ordered to be applied to them, and to be renewed three times daily.

12th. Discharged this day, in consequence of his ship being about to sail. He left hospital perfectly well, with the exception of the legs, which were not quite healed.

No. 3.—Esaïas Grönros, aged 20, admitted 24th July. When brought to the hospital he was prostrate in the last degree; no pulse perceptible at the wrist; heart's action hardly to be felt; his body in a wretched state of emaciation; legs and feet swollen and œdematous; countenance blanched; surface cold; respiration feeble, the left lung alone appearing to be filled, and no respiratory murmur to be heard in the right; the surface of the body and the mucous

membrane, wherever visible, were perfectly bloodless; and he had a short, dry cough.

It appears that this man had been ailing when the vessel left Odessa, and in the course of the voyage was obliged to be sent below, and on the arrival of the ship at Falmouth he was under medical treatment for eight or nine days.

On admission, there were administered two ounces of wine, together with the usual treatment in cases of great prostration, and in a few hours he rallied somewhat. Next day he was put on the same regimen as his fellows, substituting, however, mutton for beef. His appetite, as indeed that of his companions, was absolutely ravenous.

31st. He was this day so far recovered as to warrant the adoption of medical treatment, when he was ordered the oxalic acid mixture, and the wine to be continued to the extent of eight ounces daily.

August 2nd. Rather improved, though still very low: to have in addition to the wine a pint of porter daily. He this day made signs as if his throat were sore, or that he had some difficulty in swallowing; the short cough continues, but there is no expectoration.

6th. To have the lime-juice mixture.

8th. Was attacked with diarrhœa, but not severely. Omit the porter; ordered rhubarb mixture with magnesia; wine to be mulled.

9th. Diarrhœa not abated. Ordered five grains of the storax pill at bed-time; lime-juice to be omitted.

From the last date he gradually sunk; and on the 11th he died at 8 o'clock, A. M.

Necropsy, twenty-four Hours after Death.—Extreme emaciation. Over the spaces between the second and fifth ribs of the right side there appeared a dark green discoloration, which extended quite through the intercostal muscles; the same appearance was observed on the peritonæal surface of the recti muscles; and these muscles were soft, and easily torn through, as if partially disorganized.

On opening the chest, the entire of the investing pleura of the right side was found adherent to the costal, the adhesions, when broken through, exposing an enormous abscess, which occupied the entire of the right thoracic cavity, and was filled with a thin, purulent fluid, of remarkably fœtid odour. Some idea may be formed of the extent of this “excavation,” from the fact that it was capable of containing ninety-six ounces of fluid; its walls were formed of pulmonary tissue, evidently recognisable, though not in any place thicker than two lines. There was no bronchial tube opening into it, nor could any trace of a right bronchus, or any of its subdivisions, be discovered, further than at the very bifurcation of the trachea, where it stopped short suddenly, as if compressed by this enormous abscess, which thus occupied the entire right lung—the tissue of which appeared, as it were, to be unfolded, as the brain is sometimes unfolded in chronic hydrocephalus. The other lung was comparatively sound, if we except a few scattered tubercles in the upper lobe.

The abdomen was filled with a pale, straw-coloured fluid; the viscera healthy, except the liver, which was of a pale nutmeg colour, and slightly fatty.

The head was not examined.

I have thought that a report of these cases of true sea-scurvy,—so rare in the present day,—would not prove uninteresting to the profession at this period, when a disease of a nearly similar character has been recently so very generally prevalent throughout the British Islands, and which has been so admirably described by my lamented friend, Dr. Curran, in the last Number of this Journal. To his paper I am enabled to add, through the kindness of Professor Aldridge, an analysis of the blood in one of the cases there described, which afterwards came under my care, and also to compare it with the state of the blood in one of the cases of sea-scurvy.

The diet of these Russian sailors consisted of hard, salt junk, black (rye) bread, and dry peas, with rum grog for drink,—a diet which, I need scarcely say, would be the most likely to produce scurvy, more especially in the absence of any sort of fresh vegetable. Besides, in their unusually long voyage from Odessa to Falmouth, where they arrived ten days previously to their reaching Dublin harbour, they had been exposed to the greatest hardship, the weather being very stormy, and the ship short-handed(*a*).

The two first cases described are identical with many to be met with in Lind's treatise, and in Lord Anson's voyage. The colour of the skin, with the dry scurf on the legs, in the case of Isaac Grönros, and the ulcers, with the *bullock's-liver* fungus, in the case of Sandberg, are highly characteristic of Lind's observations at pages 108 and 115 of the second edition of his treatise, published in 1759.

The third case, that of Esaías Grönros, requires to be noticed separately. He was in a dying state when admitted into hospital, and being unable to speak or understand a word of English, it was, of course, impossible to obtain any correct account of how long he was ill, or his previous symptoms(*b*). I afterwards learned from his captain, that he had been ill from the very day he sailed,—bloody diarrhœa, debility, and a short, dry cough, with stitches across his breast, being his chief symptoms; and also that he had a previous attack of scurvy. From the first it was remarked that the right side did not move during respiration, and no respiratory murmur, as stated in the report, could be heard there; but there was no bulging of the intercostal spaces, and after he rallied a little he could lie on either side; moreover, the heart was not in the least displaced. In the absence, then, of more positive signs, no diagnosis was made as to the

(*a*) The vessel was a barque of 220 tons burden, and there were but thirteen hands on board besides the captain; four of them were not much more than boys, being under eighteen years of age, and one of them, Esaías Grönros, was sick from the time they left Constantinople.

(*b*) The captain was the only one of the crew who could speak our language, and even his knowledge of it was but very slight. I had, therefore, great difficulty in acquiring a history of the cases, and hence it is that the *signs* rather than the *symptoms* of the disease are reported.

presence of empyema, though it was suspected: I say, in the absence of more positive signs, for, owing to the extreme debility of the patient, and the agony caused even by percussion, the chest could not be very accurately examined. The general symptoms, besides, agreed so completely with several of Lind's and Anson's cases,—more especially the stitches in the chest, the difficulty of swallowing, the short, dry cough, the œdema of the limbs, the blanched state of the surface and of the gums, *and withal the good appetite*,—that I had no hesitation in treating the case as one of scurvy.

The abscess in the right lung, so well described by my clinical clerk, for extent, exceeds, I believe, any hitherto recorded. In the short space to which a report of this character is necessarily limited, it would be impossible to enter into a disquisition as to its probable cause or mode of formation. The quantity of fluid which it was capable of containing was accurately measured; and I had a cast made of the cavity, which exhibits its shape, size, and the character of its walls, and which is now in the Pathological Museum of the Dublin School of Medicine.

Professor Aldridge's analyses of the blood in the case of Sandberg, and also of the blood of a man named Clarke, who had been affected with the scurvy at that time so prevalent in the British Isles and in many parts of Europe, are appended; the symptoms of the disease in Clarke were well marked: fungoid and bleeding gums, pains in the limbs, stiffness in the joints, and ecchymoses on the extremities. He had been two months ill at the time his blood was analyzed. I give Professor Aldridge's observations on the analyses, as contained in a letter to me:—

“ The following are the results of the analyses of the two specimens of blood which I examined for you in July and August. You may recollect that our chief anxiety was to ascertain the proportionate quantities of the salts, and we were ready for that purpose to sacrifice the animal constituents. However, you will see by the following table that we can estimate the sum of the organic elements:

CONTENTS OF BLOOD.	SANDBERG'S.	CLARKE'S.
Water,	774·000	684·000
Solid matters dried at 212° F.,	226·000	317·000
Ash,	21·000	22·650
Soluble salts of ash,	7·672	11·150
Insoluble ditto,	13·328	11·500
Phosphoric acid in soluble salts,	1·750	0·400
Sulphuric acid in ditto,	2·250	3·150
Chlorine in ditto,	0·500	3·000
Potassium in ditto,	1·538	1·538
Sodium in ditto,	1·092	2·758
Phosphoric acid in insoluble salts,	0·500	0·900
Calcium in ditto,	0·344	0·600
Iron in ditto,	8·400	8·000

“ You will perceive that both specimens are comparatively rich in animal matters and in iron. The deficiency of chloride of sodium in Sandberg's is probably attributable to this salt having been in great part driven off during the roasting; still this does not fully account for the difference between it and Clarke's, for the ashes of both contain about an equal quantity of charcoal. The great deficiency of alkaline phosphates in Clarke's blood is equally difficult to account for. It is strange that the sulphuric acid and potash should be so abundant, considering that the kind of food which scorbutus usually is attributed to is deficient in these substances. It is right to mention that the ash was roasted on copper gauze, and that the solution of the alkaline salts was in both instances neutral.”

A Case of unreduced Dislocation of the Radius and Ulna backwards, of four Months' standing—Fore-arm completely and permanently extended. By JAMES S. HUGHES, F.R.C.S. I., Surgeon to Jervis-street Hospital.

JOHN TYRRELL, aged 25, a labourer, admitted into Jervis-street Hospital on the 21st August, 1847, states that about four months since he fell a distance of thirty feet from a tree, on his right side, and that on being raised from the ground he found he had lost all power over the right fore-arm, which was in the fully extended position, and so locked that it could not be flexed in the slightest degree. Much inflammation and swelling ensued and cold lotions were applied to the joint. In one month after the accident a surgeon in the country pronounced the case to be one of dislocation of both bones of the fore-arm backwards, and attempted reduction, but unsuccessfully; and ten days before admission into Jervis-street Hospital he applied to a County Infirmary, where reduction by pulleys was tried, but without moving the displaced bones. The following note of the state of the limb was taken on his admission. The limb is in a permanently extended position; all attempts to flex it are unavail-



ing; there is slight preternatural lateral motion at the joint; the fore-arm is in a state of supination; when the joint is examined a very considerable prominence can be felt in front, caused by the lower end of the humerus, over which the tendon of the biceps muscle is stretched; the internal condyle is readily detected, but in

the site of the external condyle considerable prominence is observable; the head of the radius is easily felt behind and above the external condyle, and enjoys a limited degree of rotation, but the point of the finger cannot be sunk into its cup-like depression, as is usually the case in dislocation backwards; posteriorly the olecranon is very prominent, and is on a plane considerably higher than the internal condyle: the limb, when measured from the point of the acromion to the olecranon process, is an inch and a half shorter than that on the left side.

Having subjected the joint to preparatory treatment by steaming and passive motion, together with the use of liniments for some days, I proceeded, assisted by my colleagues, together with Messrs. Adams, L'Estrange, and Fleming, to attempt reduction by means of Mr. L'Estrange's pulleys. When extension had been applied, and steadily increased for upwards of half an hour, the patient was subjected to the inhalation of ether, to which, however, he would not submit long enough for any effect to be produced; he was then placed under the nauseating influence of tartar emetic; the extension was increased as far as was thought justifiable, when, having grasped the wrist with the left hand, flexion, by means of the right knee in the bend of the elbow, was forcibly attempted, the extending pulley power being suddenly taken off by means of Mr. L'Estrange's spring forceps; but all our efforts to move the displaced bones proved ineffectual. Reduction was subsequently tried round a bench, but without success.

Remarks.—The unusual position of the fore-arm in this case renders it one of peculiar interest to the surgeon: when we take into account the presence of the prominence at the site of the external condyle (caused probably by a quantity of callus thrown out), and the difficulty in feeling the cup-like depression on the head of the radius, it seems probable that a portion of the external condyle was broken off at the time of the accident, and carried backwards with the head of the radius; but it is questionable how far this in itself could account for the permanently extended position of the dislocated bones; had the biceps tendon, together with the brachialis muscle, been torn across, we might more fully account for the position of the limb; but it was quite evident to all who carefully examined the case, that the biceps muscle held its integrity, and was stretched over the lower end of the humerus. I have looked through most of the authorities on the subject of dislocations, and can find but one case on record, of dislocation of both bones of the fore-arm backwards, in which the limb was in the perfectly extended position. The case is published in the eleventh volume of the *Lancet*, and was brought before the Pathological Society of London by Mr. Langstaff. The report states, that “Mr. Langstaff exhibited a preparation shewing a peculiar dislocation of the elbow-joint; the following is the situation of the parts: the ulna and radius are thrown outwards and backwards, and the former bone has become ankylosed to the humerus in its new position; the

coronoid process of the ulna is united by bone to the posterior aspect of the rounded condyle of the humerus, with which the radius usually articulates, its olecranon process is ankylosed to the posterior surface of the epicondyle, while the outer half of the great sigmoid notch is filled with ossific matter, and is united by the same medium to the posterior surface of this condyle; the trochlear portion of the articulating surface of the humerus preserves its natural form, and is scarcely affected by the inflammatory action which succeeded the injury; but the condyloid articulating surface is concealed by an irregular bony lamina, which is adherent to its surface, and is attached inferiorly to the coronoid process of the ulna, and superiorly to the anterior surface of the humerus, immediately above its articulating surface. The head of the radius has been thrown completely off the humerus, and the interval between its superior surface and the epicondyle has been filled with coagulable lymph, which has been organized and converted into ligamentous substance; in the midst of this ligamentous substance a small mass of bone, of a triangular figure, has been deposited, and is converted into a point of support and articulation for the cup-shaped cavity on the head of the radius, while it is firmly attached to the middle of the cup by a strong inter-articular ligament, which secures the head of the bone, while it admits of the utmost degree of movement in rotation. The external condyloid ridge of the humerus has undergone a change corresponding with the new position of the radius, and is prolonged outwards to a considerable extent in the form of a sharp, bony crest, which gives attachment inferiorly to the ligamentous substance of the new joint for the radius. The lesser sigmoid notch is quite perfect, and its cartilage and synovial membrane healthy. From the mode of union of the ankylosed bones, the arm must have been placed in the *extended position*."

The accident in Tyrrell's case is a deplorable one, as the limb in its present position is not of the slightest use to him. The case being very obscure, it becomes a difficult matter to account fully for the extended position of the limb; the length of time, however, that the dislocation has remained unreduced, and the quantity of callus thrown out, fully account for the failure of reduction. The case exhibits forcibly the necessity of looking well into the nature of accidents about the elbow-joint, and having recourse to proper treatment as early as possible. Had this patient's fore-arm assumed the usual semiflexed position in dislocations backwards, we might hold out hope of its ultimately being of some service to him; for in such unreduced cases the limb is not necessarily rendered permanently useless, as we know that in the lapse of time a new articulating surface is formed anterior to the coronoid process, the olecranon is shortened, the muscles accommodate themselves to the new arrangements of the parts, and the motions become more extensive, the limb remaining, of course, much shorter than the sound one; but unfortunately we cannot hold out such a hope in Tyrrell's case; owing to the permanently extended position of the fore-arm.

ILLUSTRIOUS PHYSICIANS AND SURGEONS IN
IRELAND.

No. V.

JOHN OLIVER CURRAN, M. B.,

Professor of the Practice of Physic to the Apothecaries' Hall.

With a Portrait.

THE present year is now drawing to a close ; and all who have witnessed its singular and melancholy scenes must look back upon it with wonder and with dread. Its history will be a darkened page in the annals of our country, recording events whose nature may warrant the incredulity of after times. It will be difficult to believe at a future, and, we hope, a happier day, that, within a short distance of the capital of England, the seat of British intelligence, British power, wealth, and plenty, nearly a million of her subjects died of hunger or its consequences ; of want, not resulting from their own improvidence, but from the long-threatened, yet not till then complete failure of a crop which was their only support. The record of this great and dreadful fact is engraved in characters so deep and strong that ages will not efface them. We have witnessed a nation's crisis, not of life but of death. The transition from misrule to neglect, from neglect to misery, from misery to famine, and from famine to pestilence, is easily understood ; and now, in social disorder and paralyzing consternation, we see the cup of our country's sorrows continuing to overflow.

This is not the place to examine the various sources of the physical and moral calamities of Ireland, but we notice her last crushing sorrow, because that many others have followed in its train ; for, while the poor were swept away in myriads, numbers of the better classes of society, including the best and bravest of our countrymen and brothers, who especially devoted themselves to save their fellow-men or mitigate their misery, were dragged down and perished with them. The young and high-born daughters of our land, the matrons of many a virtuous and happy home, the active and charitable proprietors, the devoted clergy, and, above all, the members of the medical profession, have fallen victims in numbers that are and ever will be unknown save to Him, who has declared that a cup of cold water given in His name shall in nowise lose its reward.

Among these martyrs stands pre-eminently the subject of this memoir. But a few days have elapsed since this good and faithful servant was laid in the grave, and hence his history, hastily drawn up, must be considered as imperfect and unworthy of him. Yet this is not the first time that a rude and simple monument has covered the noblest clay.

The sources of posthumous fame are many, but the glory of most men who have earned it seems ultimately to hang on some single attribute. The warrior, could he revisit the world, would point to



Day & Son, Lith. to the Queen.

John Oliver Curran.

his conquests; the ruler to his laws; the philosopher to his discoveries; the divine to his teaching; the physician to his cures. In all, though their objects and labours may have been numerous and varied, there is more or less of dependence or connexion among them, and it is rare to see the memory of a great man consecrated for efforts and acts which seem opposed or uncongenial. But the brief career of John Oliver Curran will be remembered for what to most men seem opposing qualities;—for he was the impersonation of charity; all gentleness on the one hand, and the stern assertor of the right and contemner of power on the other. The Hampden of Irish medicine, he withstood the tyrant, but laid down his life in the cause of his country's safety, his profession's honour, and his friend's defence.

John Oliver Curran was born at Trooperfield, near Lisburn, in the county of Down, upon the 30th of April, 1819. His father is a member of the medical profession, but for many years he has ceased to practise it. In 1824 the elder Curran removed with his family to Douglas, in the Isle of Man, where he remained until his son completed his thirteenth year. During his residence in this locality Oliver Curran received the first rudiments of his education, originally at a mercantile school, and afterwards at a classical seminary. When a mere school-boy he was remarkable for a modest and obliging disposition, great clearness of intellect, and intelligence beyond his years; so much so, that while the majority of his companions were labouring to comprehend the ordinary course of instruction usually imparted in preparatory schools, his apt mind seized with avidity, and at once understood, the point at issue, and thus frequently anticipated the information of his preceptors. Being naturally of a contemplative mind, and gasping after such information as the books within his reach afforded, he seldom indulged in the common plays and amusement of boys of his age, but spent the greater portion of his play hours in reading and study.

In 1833 he entered the University of Glasgow, and applied himself with great assiduity to the study of mathematics, logics, and classics. Upon entering this university he successfully competed for the prizes in the Greek and Latin classics, and at a subsequent period for those of logics and moral philosophy. Of the matured state of his understanding at this early age, it may be mentioned, that at the time of Sir R. Peel's election for the Lord Rectorship of the University of Glasgow, young Curran was appointed one of the Committee for Lord Campbell. Even while engaged in the preliminary course of education, such was his ardour in the pursuit of knowledge, and such was his desire to outstrip his competitors in this noble race, that he at one time seriously impaired his health by over-application. During the last two sessions at the Glasgow University he devoted himself to the study of medicine, and attended the lectures on many of the elementary branches of that science.

In 1838 he entered the University of Dublin, as a student of both arts and medicine, but, having once determined upon his future profession, all his studies, physical, mathematical, and classical, were

made subservient to that one end. In addition to the ordinary curricula prescribed both by the universities and the schools of physic, he applied himself with great assiduity to the study of modern languages, French in particular, a subject to which we would earnestly direct the attention of young medical men, and from which Oliver Curran, both in his studies upon the Continent, in his extensive reading, and in his intercourse with foreigners, derived no inconsiderable advantages. In his whole college career, and even in his very boyhood, he exhibited an uncommon aptitude for mathematical and philosophical pursuits; for astronomy in particular he had marked predilections, and when quite a boy constructed several ingenious instruments for making observations in that science.

To acquire a knowledge of the practical part of his profession, he became a student at the Meath Hospital, and attended with unwearied assiduity the medical wards of that institution, and the clinical instruction of Drs. Graves and Stokes. There are rewards and prizes during the undergraduate course of a young medical man, which, if gained, point with a tolerable degree of certainty to the success of his future career, and these, one and all, were sought and obtained by the subject of this memoir. In 1842 he obtained the stethoscopic and clinical prizes in the Meath Hospital, and Dr. Stokes's first prize for the practice of physic in the Park-street School of Medicine. In 1843 he obtained, by public examination, the situation of intern pupil in Jervis-street Hospital,—a post which he aspired to in order to become practically acquainted with the manipulations and mechanical part of surgery. This mode of election by general *concours*, to public medical and scientific situations, had long occupied the attention of our deceased friend; and although we are not prepared to go the length of saying that it is by any means the best, yet its introduction into this city would be a manifest improvement on the present system. He was afterwards Dr. O'Ferrall's clinical clerk in St. Vincent's Hospital.

In the summer of 1843 he took his degree of Bachelor of Medicine, and immediately afterwards proceeded to Paris, where he remained a year, assiduously devoting his entire time to dissection, observation of the practice pursued in the Parisian hospitals, and the cultivation of the acquaintance of the most eminent physicians and surgeons in that city of science,—an acquaintance which soon ripened into friendship, the result of mutual admiration and esteem. The estimation of Dr. Curran's ability and practical knowledge of his profession may be learned from the fact, that, during his stay in Paris, the French Government offered him an appointment as physician to the English and Irish labourers employed upon their railways. During his residence in France he addressed some very amusing and instructive letters to his relatives in the Isle of Man, upon the state of society, manners, &c., in Paris. These, though not intended by their author for publication, were printed in a local newspaper, and afterwards collected by his friends. He returned to Ireland the following year; and in 1846 he became a Licentiate of the King and Queen's College of Physicians, and in the same year was

elected Professor of the Practice of Medicine to the school of Apothecaries' Hall, one of the physicians to the Dublin General Dispensary, and also Secretary to the Council of the Pathological Society. Shortly after the Dublin Medical Journal passed into the hands of its present Editor, and at the time when it assumed its present form, Dr. Curran became one of its chief contributors,—a post which he filled up to the date of his last illness. He also communicated, during the last two years, some literary articles to the pages of our able contemporary, the Dublin University Magazine. In the summer of 1846 he returned to the Continent, chiefly for the purpose of visiting and remarking upon the lunatic asylums there; and the result of his observations appeared in the philosophical review of the Parliamentary Reports on Lunacy, which appeared in the third Number of our present series. During this sojourn on the Continent, he passed from France into Holland and Belgium, visiting the various hospitals, scientific institutions, and men of learning, in these countries. Subsequently to this visit several of the medical societies abroad conferred upon him their honorary or corresponding diplomas. Dr. Curran was a graduate of Trinity College, a member of the Royal Irish Academy, and had long been a most useful working member of the Royal Dublin Society, in which body he was one of the Council, and also a member of the Committee of Chemistry. In a word, there was no medical, and few literary or scientific societies in Dublin, of which he was not a member, and in most of them he took an active part.

We have thus briefly enumerated some of the epochs in the life, and noted down a few of the labours, of this excellent man; and before we enter more minutely into these labours, or offer our opinion upon his character and conduct, we think it right to notice a remarkable personal peculiarity which Dr. Curran rigidly adhered to up to the date of his last illness. He had never tasted animal food for upwards of three-and-twenty years; he had never drank wine or malt liquor except once, when he had typhus fever, in 1840, and his food consisted exclusively of milk, fruits, and farinacea.

It will be in the recollection of the readers of this periodical that a very learned review of Mr. Smith's book on "Fruits and Farinacea the proper Food for Man" appeared in our Number for September, 1845. This was Dr. Curran's first essay at reviewing; and for its critical analysis, its depth of learning, its philosophical inquiry, and literary composition, we believe few first efforts of the kind will bear comparison with it. As, however, there were some novel doctrines on the subject of dietetics, both in the work itself and in the critique, Dr. Curran, at our request, added a short history of his own experience in the matter, from which we extract the following passage:

"When about four years of age, having been much bantered by some friends on petting lambs and rabbits, and afterwards eating the flesh of such animals, in a fit of childish indignation he declared he would never again eat flesh. This resolution was adhered to, and his parents (who were not very much impressed with the necessity of animal food, and who believed that the whim would soon wear off)

not interfering, abstinence from animal food soon acquired the force of a habit, which has grown with his growth and strengthened with his strength, having now been persevered in for more than twenty-one years. Since the period mentioned he has entirely abstained from eating anything that ever had life, as well as from eggs and cheese; whilst he never partook of even one glass of wine, spirits, or any intoxicating liquor, nor does he make use of tea or coffee. His health has been invariably good, and at school and college he was possessed of more activity and strength than any of his associates of the same age, whilst he exceeded all in endurance. Though sedentary habits must have prevented the full development of his muscular powers, he has on more than one occasion walked sixty English miles in one day, without any other inconvenience than blistered feet. His weight is at this day within a pound of what it was at the same season seven years ago, but increases half a stone every summer, losing as much during the winter."

It was not, as some persons have supposed, any religious feeling which induced our friend to adopt and steadily adhere to this mode of life. In society and at the social board he partook of his frugal fare with apparently as much zest as those around him did of the costliest viands and the choicest wine, and he hob-nobbed in milk or ice-water with as much gaiety as others did in champagne. How far his mode of life might have influenced his last fatal illness it is difficult to say: but during the latter part of his disease wine was administered in considerable quantity.

As a lecturer he was remarkably plain, forcible, and explicit; in argument or debate, logical, forbearing, and persuasive;—learned without pedantry, he appeared rather to receive than impart instruction. His well-stored mind, the result of varied and extensive reading, travel, and observation, together with a modest demeanour, and towards his friends a most winning manner, rendered him in conversation most charming and instructive, while his high religious feeling never permitted a word or expression to escape his lips which might not be written on his monument. To those who had not the pleasure of his acquaintance, or mixed much in his society, this may seem excessive praise, but those who knew him best and longest will bear witness to its truth. The number of warmly attached friends which he possessed tell how susceptible his own heart was of the purest affection. Towards those he loved this affection became devotion,—a feeling so strong and generous that he sacrificed his life at its shrine. It was not alone, however, his learning and his knowledge which gained him admirers, nor his warm heart which surrounded him with friends; there was that within him evidenced in his life, and graven on the history of his actions, which commanded the respect of all,—unpurchasable HONESTY, and unbounded philanthropy.

To the student of medicine, the character, pursuits, and rapid elevation of this young man should form a model worthy of the closest imitation. Talents of a high order he undoubtedly possessed: but it was to his untiring energy, and unceasing study of his art,

that his elevation was due. Disdaining the grinder's crux or the school's dogma, he was the very antithesis to those who have been, with but little preliminary education, and perhaps less practical knowledge, pushed rapidly through the curriculum of a corporation or University at some of the doctor manufactories of the present day.

Well may the dull their foolish fathers blame,
Who jilted trade of many a useful name ;
To woo a mistress that will smiles dispense
Alone to learning, talent, toil, and sense.

It was knowledge, not diplomas, which formed the object of his ambition, by which he hoped to win, and did win, the good opinion of the profession and the public. As a practical physician, imbued with the most philosophical views, as a teacher, as a writer, and, above all, as a man who stood forth nobly, at a considerable sacrifice, for the honour and the dignity of the medical profession, the school of Dublin has sustained in him a heavy loss.

As a writer, Dr. Curran was not much known to the medical world, his chief original article being that on scurvy, which appeared in our last Number. This is before our readers, and they can judge of its importance, its research, and the promise which it gave of future success. It was chiefly as a reviewer that Dr. Curran had as yet excelled. It is unnecessary for us in this Memoir to lay open the secrets of editorship, still we cannot in inditing this notice of one of our most valuable contributors, refrain from pointing to a few specimens out of many of his able productions, in addition to those already alluded to. The review of "Homœopathy and Homœopathic Writings," which appeared in February, 1846, shewed how well fitted he was to enter the list with the votaries of Hahnemann. There was this remarkable peculiarity in the construction of Curran's mind,—pure and void of all guile himself, he did not always read human nature, as presented to him in the living subject, aright; he could not bring himself in a moment to believe that hypocrisy and deceit influenced the actions or polluted the lips of those with whom he conversed; yet no man sooner recognised a quack from his writings, and to this quick perception may be traced some of those necessary castigations which the honour of science, and the vindication of truth, has caused us to insert in our Periodical during the last two years. Severe, however, as were his strictures, they were never personal, nor "whetted on ill-natured stone;" it was books, principles, practice, and literature, not men, he analysed. The Pathological Reports were entirely published under his superintendence, and the Medical Periscope which appeared in August, 1846, shewed how conversant he was with foreign medical literature.

His writings are eminently remarkable for their unbounded research, their power of argument and perspicuity of style; no man understood better the force and value of the English language.

Although Dr. Curran took no active part in politics, and was not associated with any of the political confederations of the day, he felt warmly, and took a lively interest in the national cause. To

elevate us in the scale of nations he not only toiled, but by his conduct and deportment in his life and actions (the true tests of patriotism), mainly contributed.

We now approach a period in our friend's short but bright career, in which he played a part in the history of this unhappy land, which future annalists will, no doubt, hand down to distant posterity, as an instance of philanthropy, devotion, and patriotism, worthy a primitive and more refined age.

Plague, pestilence, and famine, spread over the face of the land, and threatened the annihilation of our population. To meet their ravages, some temporary machinery was constructed by the Government, a Board of Health among the rest. We have no desire in this memoir to enter upon the subject of the applicability of the measures prescribed by the State to meet the exigencies of the times, nor at all allude to matters of a political nature. During the last winter and spring the fever was chiefly confined to the country parts, and the ordinary appliances in the city were deemed sufficient for the number of our poor affected by the epidemic. As, however, summer approached, Dublin was attacked by the pestilence, and extraordinary measures had to be taken to afford shelter and relief to the multitudes who daily sickened in the lanes and alleys, the garrets and cellars, of the ruined and dilapidated districts of our capital. Temporary fever hospitals had to be erected, and an additional staff of medical officers appointed. One of the first persons appointed by the Board of Health was Dr. Curran. The official document intimating the circumstance to him stated that he was to receive a "*remuneration of five shillings per day.*" Astonished and indignant at such a scale of wages being offered to a member of the medical profession, he immediately consulted some of his friends, stating his unwillingness to accept the post on such terms, and his desire to resign immediately. Those he consulted considered that it would be more advisable to take the opinion of other members of the profession on the subject, particularly as it was a matter which concerned not only the respectability and welfare of the body at large, but the interests of all those who might hereafter be appointed. Accordingly, some twenty members of the profession were immediately summoned, and met together the following day, to consider the propriety of Dr. Curran's resigning, and the advisability of holding a public meeting to remonstrate against medical grievances in general, and the act of the Board of Health in particular. At this meeting Dr. Curran stated his intention of resigning, but agreed to wait for some days and abide by the decision of the public meeting.

A requisition calling a public meeting of the profession at the Royal Dublin Society House was immediately signed by those who were present, advertised in the newspapers, and within the two next days it bore the signatures of upwards of seventy physicians and surgeons resident in Dublin, including every man of eminence unconnected with the Board of Health. The meeting was fixed for Tuesday, the 1st of June last; a committee was appointed to conduct the proceedings; resolutions were drawn up, and placed in the

hands of the respective persons who were to move them. That meeting was never held. One of the chief causes of this arose from the circumstance of the chairman having upon the day previous refused to act, and others having objected to move resolutions, under the impression that a memorial was more advisable than a public meeting(a). These are the naked facts. We have no desire to enter upon the question at issue at present between the profession and the Board of Health, it has been already ably discussed elsewhere, but the following statement is here necessary. As soon as it was determined not to hold the meeting, Dr. Curran immediately resigned, informing the Board of Health that, consistent with the dignity and honour of the profession to which he belonged, he could not accept the remuneration offered in their appointment. Some time previously to this appointment Dr. Curran had been elected one of the physicians to the Dublin General Dispensary,—an office of immense labour, and entirely without emolument. Those only who have toiled amongst the poor of a large city can form any idea of the extent of this labour. In the wretched abodes of misery, in the crowded, ill-ventilated rooms, each often inhabited by several families of the very poorest classes, and located in the most miserable and filthy situations, where infection ever remains endemic, and where want adds fuel to the pestilence,—there lay the public practice of Dr. Curran,—there was his charity expended,—there his skill exhibited,—late and early, there he toiled.

The calamities which had invaded Ireland having threatened the Continent, the French Government sent M. Rodier and M. Henri Gueneau De Mussy as medical commissioners to inquire into the management of fever, and to study the character of the epidemic in Dublin. Now, one of the most amiable traits in Dr. Curran's character was his unceasing attention to foreigners; few medical men of other countries visited our metropolis during the last few years who did not experience his devotion to their service, in introducing them to the profession, conducting them round the various institutions, and escorting them to the most interesting localities in and about our city. M. De Mussy had long been the personal friend of Curran; and during the course of his inquiries into the character of our epidemic he was much assisted by his friend, who accompanied him to the various fever localities and hospitals. In one of these visits they witnessed that heart-rending scene which elicited the ever-memorable letter of John Oliver Curran, detailing the frightful neglect of the fever-stricken population of our metropolis, which appeared in Saunders's News-Letter and the Freeman's Journal of the 24th of last August. We will not quote one sentence of this spirited and benevolent appeal to the sympathies of Europe; the scenes which it so graphically and feelingly described are engraven upon the hearts of the humane of every country in which they were published; they have been fully acknowledged by all competent authorities; their truth has been sealed with blood: the echoes of this appeal are still

(a) The resolutions and memorial intended to be adopted at this meeting were embodied in the representation to the Lord Lieutenant.

murmuring through every land that possesses a literature. This letter has become a part of our history. Let it then never be forgotten by the Irish people that to this courageous, honest, and indignant appeal, made in their behalf to the sympathies and benevolence of Europe, were the gates of fever sheds, the barred portals of hospitals, and the stern hearts of rulers, opened, to afford them shelter and a cup of water, when they blackened, exposed to the sun and sky, in the lanes and ditches around our metropolis.

Gueneau De Mussy, in his active and untiring inquiries late and early at the fever sheds, contracted typhus of the very worst description; from the moment he took ill Curran became his nurse, seldom leaving him day or night, neglecting all his other duties, and devoting himself with the noblest heroism to his friend, till at length the fatal typhus claimed him also for its victim. The disease very soon exhibited a most malignant type, presenting all the characters which it assumes in those who have much exercised their intellectual faculties. To violent delirium succeeded prostration and collapse; and, notwithstanding all that the skill and brotherly aid of some of the ablest men of the profession could effect, he sunk rapidly upon the ninth day of the fever, and expired at 9 o'clock on Sunday morning, the 26th of September, 1847, in the twenty-eighth year of his age(*a*). The gloom which spread through all classes as soon as his death became known need not be described,—it has scarcely yet passed away.

The entire British press, with one exception(*b*), have paid just tributes of respect to his memory.

(*a*) In recording the death of Dr. Curran, and alluding to the illness of our friend De Mussy, we feel a mournful pride, while we offer our thanks to the several young medical men and students, who, with dauntless courage and untiring zeal, watched for days by the sick bed of these gentlemen.

(*b*) The journal to which we allude is the Dublin Evening Post, the official organ of the Irish Government and the Board of Health.

The brutal ferocity of an article published in that journal on the 12th of October last, attempting to asperse the memory of this good and pure-minded young man, is only equalled by its utter want of truth. It is,—can we believe such heartlessness?—an *answer!* to the tribute paid to his worth by a contemporary journal, the Lancet. It is *not true*, as the writer well knew, that Dr. Curran contracted the fever of which he died, “in the cellars and garrets of the poor,” and it is as ungenerous as it is false to assert it. It is *not true*, as the writer in the Post must be very well aware, that Dr. Curran visited these miserable dwellings of the poor “in pursuit of that information which, but for evil councils, he could have obtained with comparatively little risk of infection in well ventilated hospitals;” and to put forward such a statement is to rob his character of that benevolence and charity which the writer, not knowing or feeling himself, can neither understand nor appreciate in others.

It is *not true* (we have the authority of his nearest relatives for saying so), that Dr. Curran ever regretted his dignified refusal of the wages of the Board of Health, or that his own unbiassed judgment would have led him to accept it. It is equally *untrue*, and that the writer knows also, that he was driven to “sinks of contagion” by the advice of his friends; his gratuitous attendance upon the poor of Dublin having commenced long prior to his five shilling appointment.

It is a fact of which the (medical) Editor of the Post must be fully con-

“The kind and generous disposition,” says the *Freeman’s Journal*, “which characterised Dr. Curran in the private relations of life, won for him the esteem and affection of all who had the privilege of his acquaintance. Among his professional brethren his opinion, notwithstanding his youth, ranked with that of the seniors of the profession, and he was as justly as he was generally recognised as one who, had he been spared, must ere long have taken a first place. To his mourning friends,—and the circle embraces all who knew him,—there is some consolation in the reflection that it was Dr. Curran who gave shelter to the fever-stricken, and relieved our city from the odium of cruelty and neglect.”

The *Medical Gazette*, alluding to his treatment of the poor, justly observes:

“That any man should be found who could thus give up his time, and exercise gratuitously his professional skill in the treatment of cases in which his life was constantly exposed to the greatest danger, is a fact which must surely satisfy the Government that they have taken a false step in this matter. It is not often that so great a sacrifice is made, or that the honour of the medical profession is so sternly considered as it has been in this instance.”

The *Lancet*, the stern and uncompromising advocate of Irish medical independence, contains the following remarks, as just as they are true:

“His public life had extended over but a few months; but in that short time he had endeared himself to friends and opponents; and all sects and parties among his fellow-citizens have been loud in his praises. His was indeed true glory, and deserves of his country a better monument than the soldier or the politician.

“His spirited remonstrance to the Board of Health roused the profession in Ireland; the chords were struck by the right hand, and his single signature was, as our readers know, promptly backed by more than eleven hundred names, from the Presidents of the Colleges of Physicians and Surgeons, down to the youngest practitioners. More recently, his vivid and benevolent descriptions of the heaps of fever-stricken dead and dying waiting for admission to the fever-sheds, at Kilmainham and other places, produced an extraor-

scious, that the Government were warned of the danger and imprudence of shutting up Cork-street hospital; and also of its having been re-opened a few mornings after Curran’s letter appeared.

The reason of Dr. Curran resigning his appointment,—to an office, it must be remembered, not then in operation,—has been explained in the text of this biography, and the many gentlemen who attended the preliminary meeting alluded to can vouch for its accuracy.

The numerous friends of Dr. Curran know that the accusation of the *Post*, that in his conduct so often referred to he was but a “dupe” and a “victim,” is a groundless calumny.

To the Editor of the *Dublin Evening Post* these remarks are not applied; but to the medical writer in that periodical. We must, however, remind our friend, that although his paper is the organ of the Government, there is an editorial censorship to be observed, and a respect for truth and honour, for which he should be answerable.

dinary excitement in Dublin, and led to a better and more humane state of action than had previously prevailed among the Board of Health, the Relief Commissioners, and the Irish Executive. And now he has sadly, but perhaps appropriately, closed his brief but glorious career, by setting the seal of his life to his professional and philanthropic devotion. Benevolence has marked him for her own. He has added another name to 'the noble army of martyrs' which our profession must furnish to science and to civilization. Not even Sidney Bernard^(a), the volunteer martyr of the 'Eclair,' deserves to be more dearly remembered than Oliver Curran,—the one an assistant-surgeon, the other a young dispensary physician. Our young men may be proud when they furnish such examples to the profession and to mankind. Galen fled from Rome on the approach of pestilence, and Sydenham retired from London before the great plague; but here are novitiates of modern times nobly eclipsing in fame the ancient sages and veterans of medicine."

Saunders's News-Letter also paid its tribute of respect; and Lemoine, the able conductor of the *Journal des Debats*, has penned an eloquent eulogium upon our friend, who was, he truly observes,

"One of the hopes of his country. His death is a loss to Ireland, to whom he had consecrated his life,—to his friends, who had for him such respect and affection.

"Poor Curran! Such a pure, simple, disinterested, and patriotic soul! Never have I heard a word uttered by him which was not upon Ireland and for Ireland. His unhappy country, which he saw writhing and dying in misery, hunger, and fever, was his sole thought—his greatest unhappiness.

"As we well know, the best and most worthy homage we can pay to his memory is, to appeal on behalf of Ireland, for recompense for the loss she has sustained, that the life of sacrifice and devotion which he led upon this earth may be counted in favour of his unhappy country."

Among the many wants in Irish character,—of industry, love of truth, respect for the laws, hatred of murder, and others equally dark and lamentable, which we must own to, and should strive to correct,—there is none that has exercised a more pernicious influence than want of independence. By what means this has been produced, whether it is inherent in the race or is the acquired result of circumstances, we cannot here discuss; but we allude to this peculiar national trait, because the subject of this memoir was an instance of the contrary: no man ever possessed a more independent spirit than John Oliver Curran. This independence of character not only influenced his actions, but at times rendered him positive in opinion.

It has been truly observed, in some of these quotations, that Dr. Curran was one of the most promising young physicians in Dublin; he had already made rapid strides in his noble career, and gave bright promise of the future.

Let it ever be remembered by the Irish medical profession that

(a) Sidney Bernard, the Eclair martyr, was also an Irishman, and had been an apprentice of the late Dr. Colles.

he was the man who first raised his voice against the insult and indignity offered to that body, by refusing to accept the miserable stipend proposed as remuneration for risking their lives in defending the Irish peasant and artisan from the ravages of the pestilence which now stalks amongst us. And yet, while he thus spurned the degrading offer, for the benefit of his brethren, he daily toiled without fee or reward, in the haunts of misery and distress, to relieve suffering, and to succour the fever-stricken poor: and in his generous endeavour to rescue others, in his love for his friend and his duty towards the stranger, he himself fell a sacrifice to the Moloch of pestilence. His death is a national calamity.

Disregardless of danger, he grappled with the plague; patriotic and generous, he devoted his time, his genius, and his knowledge, to his country, to science, and his friends. In John Oliver Curran his family have lost the most feeling and affectionate of relatives; an aged father his only son; his friends a soul of sterling and enduring worth, unalloyed by selfishness, unpurchaseable from its allegiance; the Irish School of Medicine, the University, and the Royal Academy, one of their most promising sons. Science may mourn the most devoted of her votaries; Ireland a man whom she could never spare, now least of all; and humanity a friend. For our rising literature his able pen was wielded; for our dawning nationality his manly voice was raised. Gentle and unobtrusive in his manner, a tone of serious thought and an extraordinary fund of information, with a remarkable facility and clearness of expression, graced his conversation, and rendered him one of the most delightful and instructive of companions. If being utterly devoid of envy towards others, and a holy, never-failing desire to do good, could insure a man the world's friendship, then had Dr. Curran no enemies(*a*).

MEMOIR OF JAMES HOUGHTON, M.D.

To the long list of medical martyrs, who have fallen victims to the prevailing epidemic, we have to add the name of Dr. James Houghton, of Brookboro', in the county of Fermanagh, who died on the 3rd of October, after an illness of twenty-eight days. By all who knew him his loss will be long and deeply deplored, as he had, by arduous and unceasing toil in the public service, and the most unselfish devotion to the wants of the poor, gained most fully the esteem and affection of all who required his aid or witnessed his devotion to the several branches of his profession. Dr. Houghton graduated in Edinburgh in the year 1829, having previously studied medicine

(*a*) The portrait which accompanies this memoir will be recognised as an admirable likeness of our diseased friend. It has been lithographed by Lynch, from a drawing made after death by Mr. Ford, whose courage as well as artistic skill, in sitting for several hours in such close proximity to infection, we feel bound to mention. We had also the assistance of a daguerreotype and a cast, the former, however, of little value.

during several years in the University of Dublin and the Meath Hospital. On taking his degree he settled in Dublin, and became attached to an extensive charitable institution, to the duties of which he devoted himself with zeal and assiduity. During this period, having been recommended by Dr. Stokes to the editors of the *Cyclopædia of Practical Medicine* as fully competent to aid them in forwarding that important and valuable work, he contributed to it several articles,—those on lepra, scabies, lichen, lupus, urticaria, organic diseases of the stomach, and pneumothorax, being written by him. There are few of our readers who have not probably had occasion to admire the two last of these articles, which contain the best history of these important diseases to be found in medical literature, and which were well calculated to establish for their author the character of an accurate observer, a sound reasoner, and a careful practitioner; and it is highly probable, had Dr. Houghton remained in Dublin, such and similar contributions to medical science would soon have given him considerable practice in his profession. But just at this period, when his position was being established, Dr. Houghton conceived it to be his duty to relinquish his position in Dublin and retire to the country, where, in one of the wildest mountain districts of the north of Ireland, he devoted himself almost gratuitously to the relief of the poor; and for many years, with the devotion and self-denial of a more primitive age, he led a life of unrequited labour such as few could imagine, far less endure; by day and night wandering among pathless hills to convey to the bed of sickness, or the home of want, the alleviation of his professional skill, or the perhaps more needed sustenance contributed from his own scanty resources. Wherever there was any one “afflicted or distressed in mind, body, or estate,” they were sure to find comfort in his sympathy, or substantial aid from benevolence wrought on by his representations and stimulated by his example; and to him might most truly be applied the beautiful lines of Dr. Johnson:

In misery's darkest caverns known
His useful care was ever nigh;
Where hopeless anguish poured his groan,
And lonely want retired to die.

About two years since, he was induced to remove to Brookboro', where he was appointed physician to the dispensary and hospital, and where he also had the inducement of the society of one of his oldest friends; and there, during the past year of famine and disease, he still pursued the same career of unselfish devotion to the wants of the poor, and the same unceasing anxiety to perform his duty as a physician and a Christian, by undying zeal, unceasing labour, unrequited benevolence, and the most holy assiduity in conferring moral benefits upon all those with whom he had intercourse. In the midst of this career of usefulness he was cut off, having, in the discharge of public medical duties, contracted fever, which his anxiety for others caused him to neglect, until he was stricken down and removed from the scene of his labours to that rest which he had always looked forward to as only attainable in another life.

A LETTER TO THE EDITOR OF THE DUBLIN QUARTERLY JOURNAL OF
MEDICAL SCIENCE, RELATIVE TO THE PROCEEDINGS OF THE CENTRAL
BOARD OF HEALTH OF IRELAND.

By ROBERT JAMES GRAVES, M. D.

SIR,—I was for many years connected with your Journal, both as editor and contributor, and therefore hope you will allow me to claim the privilege of addressing you on a subject somewhat different from those which generally occupy the pages of your excellent periodical. As you have taken so active and useful a part in vindicating the honour of the profession, with respect to the remuneration offered by the Board of Health to physicians of fever hospitals and dispensaries, I need say nothing to enlist your sympathy or insure your cooperation.

Having been my pupil, and diligently attended my clinical instruction, you may, perhaps, bear not an unwilling testimony to the fact, that I ever used my best efforts to stimulate my pupils to exertion, and devoted all my energies to awaken in them a proper estimate of the responsibility they were to incur when they entered upon the practice of their profession. Having laboured for upwards of twenty years in instructing a numerous class of students, I may assert with truth, that there are few hospitals or dispensaries which are not occupied by some of my pupils. And consequently, at this present calamitous period, I am destined to feel a mixed sensation of pleasure and of sorrow;—of pleasure, at finding that my labours have not been altogether unavailing, as is testified by the zeal and ability of many who have formed part of my clinical class;—of sorrow, caused by receiving almost daily accounts that some have sickened and others have actually fallen victims to the present epidemic. The probability of such a mortality I never omitted to state in my course of lectures; and I warned those who heard me, not only of the honour they might earn, but of the dangers they were to incur. But, Sir, when, judging by the experience of the past, I thus anticipated the future, it nevertheless appeared to me that, notwithstanding those dangers, I was justified in exhorting them to perseverance; for I felt, and endeavoured to make them feel, that the profession in which they were engaged was endowed with sacred attributes, sufficient to compensate for its difficulties and its trials. To create life is the attribute of God; to preserve life is the noblest gift man has received from his Creator. Life and death are engaged in an eternal struggle—they succeed—they alter-

nate—they displace, but never annihilate the one the other; they fill the world with their strife, but it is a strife where the antagonists contend like night and day, each chasing but never overtaking each. Between life and death there is no twilight; the gladness and brightness of life end suddenly in the deep and awful darkness of death. Is it, then, given to man to warn back this dreaded power? Can man, even for a moment, retard the advances of death? Yes, we are permitted to relieve one another; we are allowed to exercise our reason in exploring the means of curing disease, and have been granted the power of applying these means successfully. Had man, like other animals, been gifted only with organs of destruction,—had his reason been solely employed in increasing the power of his natural weapons of offence,—then, indeed, he would have been an animal accursed on the face of the earth, and war and bloodshed would have been blessings if they only effected the destruction of so hateful a being: but it has not been so ordained. The possession and exercise of the healing art shed a kindly lustre over man's nature, and afford him the means of practising the sweetest of all the offices of charity,—curing his fellow-creatures: but if this be one of the goodliest fruits borne by the tree of knowledge, it cannot be attained nor enjoyed by all; it can only be reached by him who, patiently labouring year after year, has perseverance enough to seek, by means of constant study and constant observation, this precious gift. I would not depreciate the utility of other literary pursuits, and do not wish to undervalue the studies or the objects of other professions. The natural historian is justly proud of a science which constantly employs him in observing the works of his Creator; the chemist boasts, with justice, that his favourite study teaches him to lift up the veil which concealed some of the most precious and singular among nature's secrets; the astronomer examines the position and the motions of distant worlds, weighs the satellites of Jupiter, and from the perturbation of his motions, Le Verrier divines the existence of another planet.

This is a glorious triumph of man's reason, and well may the votaries of astronomy and the physical sciences refer with pride to such victories; but is there not more of the Deity in a single particle of living matter than in the whole inanimate mass of a planet or a sun? Is not life the clearest, the most direct revelation of himself, which the Creator has deigned to make.

When all was without form and void, the Spirit of God moved, it is true, on the surface of the chaotic mass, but it did

not enter into its pores until life was to be produced ; then God breathed forth, and man rose vivified by the divine expiration. This life, this direct emanation from the Deity, forms then the subject-matter of our studies ; to observe its laws is the privilege of the physiologist ; to maintain it, to resist the encroachment of disease, or defer the approach of death, is the hallowed office of medical science. This is assuredly one of the noblest functions of reason, and for nothing should man be more humbly grateful to his Maker than for having conferred on him the power of relieving human suffering.

Our profession, it is true, does not offer a number of great prizes, such as tempt the passions and excite the emulation of those who devote themselves to the practice of the law ; but still medicine has advantages more than enough to counterbalance this apparent deficiency. The path of the successful lawyer leads, indeed, to the highest pinnacles of worldly preferment ; wealth and honours tempt him onwards, for every year witnesses, and witnesses deservedly, the highest titles conferred upon individuals who have distinguished themselves as advocates. No such prospects, no such rewards, scatter rays of hope over the weary and devious tracks by which the struggling practitioner of medicine is doomed to travel ; he looks not for power and patronage ; the senate-house does not, in his forward view, terminate the perspective, nor can his fancy busy herself with limning the outlines of the coronet, destined in future years to adorn his escutcheon : the worldly allurements are great which stimulate the efforts of the jurist, — nothing is wanting, all the most powerful and secret springs of the soul are touched, and the whole man, body and mind, engages with ardour in the contest for wealth and rank. Not so the physician : the distant horizon which bounds *his* view is not thus illuminated ; it conceals not below its verge objects of ambition so brilliant, rewards so bright, that they diffuse round them a dawn of light before they themselves are actually within ken ; he lives not in an atmosphere of hope, endowed with a refractory power strong enough to lift upwards the still unrisen orb, whose bended rays thus reveal to the eye the long-desired object of ambition, and impart the refreshing influence of light and heat.

But is there nought to guide *us* while wandering in the darksome ways which must be trodden by every medical man at the commencement of his journey ? Yes, for though Hope bears us not along with so powerful an impulse, yet her still sweeter sister, Charity, stretches forth her hand to support the physician in his exertion ; Charity, the spirit of good will

towards man, points to the sick man's bed, and, though it be the bed of poverty, *there* will the physician find his reward, there will he earn the recompense of saving life, of restoring health.

This is the advantage the medical profession enjoys above all others ; we can, without any outlay of capital, enrich the poor, for to the labourer health is riches. The habit of doing good is soon acquired, and generally ripens into a necessity which forces its happy possessor to increased and more energetic action, and repays his labour daily and hourly with the most gratifying of all feelings, the conviction that he is at the same time increasing his own knowledge and mitigating the pains of the poor and needy. Other professions are busied with the works of man. The jurist studies his laws, the historian records remarkable events, and endeavours to unfold their relation to each other, and to expose the motives of the chief actors ; but the medical man is employed in observing not the works or devices of man, but the laws which regulate health and disease, laws bearing on them the impress and sanction of the Deity. It is in consequence of this that our art is one of which no human power can deprive, no revolution rob us. In times of violence and anarchy, if the lawyer be driven from his native shores, his craft will avail him nothing in countries governed by laws very different from those he has studied ; should the merchant be deprived of his capital, how will he carry on his traffic ? The buildings, warehouses, and machinery of the manufacturer may be destroyed in a night, and himself thus ruined, but what but the strong hand of death or disease can rob the physician of his power to cure ? What land so foreign that he cannot in it earn a reputation by the exercise of his noble profession ? The man who can dexterously set a broken limb, or skilfully treat a fever, may become an exile, but he will never be a stranger ; for wherever he goes, whether he practises in Africa, in India, or in China, he will be considered as a friend by the natives. The accounts of travellers all agree in attesting the truth of this statement, and it was the gratitude for receiving a physician to heal their sick that gained from the natives of India the permission to establish the first English factory there ; it was the skill of the accompanying physician which facilitated the progress of some of our most enterprising fellow-countrymen through the unexplored countries of Africa ; it was the favour earned by the surgeon that unsealed some of the closed ports of the *Celestial Empire*, and opened new regions for the exercise of British enterprise and the profitable employment of British commerce.

Such, Sir, are the motives which should guide every honourable mind in the study and practice of the medical profession; such are the views of its ennobling nature that ought to cheer us in our struggles with dangers and difficulties; and such are the claims of the healing art on peoples and governments. Principles and feelings such as these I have constantly endeavoured to inculcate on the minds of my pupils; and I regret not that I have sometimes kindled the spirit of enthusiasm in their breasts, as it may even now serve to prevent them from being contaminated by the grovelling example of those who labour to corrupt them.

In Ireland, generally, the practitioners of medicine and surgery have been long conspicuous for their philanthropy, and for the great zeal they have displayed in relieving the sufferings of the sick poor; but in Dublin especially the munificence of the profession is permanently attested by the great charitable institutions they founded and endowed, such as Sir Patrick Dun's Hospital, Steevens' Hospital, the Lying-in Hospital, &c. When dispensaries did not exist in this country, and fever hospitals and infirmaries were unknown, the attendance on the sick poor was gratuitously performed by practitioners who devoted a part of each day to the labours of charity. As the population increased, the system of voluntary medical relief became necessarily inadequate, and consequently hospitals, infirmaries, and dispensaries were founded, and were brought into active operation, not on one great and comprehensive plan suited to the national wants, but in an insulated, unconnected, and irregular manner, such as might be expected in a country where the Government paid but little attention to internal administration, its object being rather to maintain political animosity between the different sections of its Irish subjects than to extend to all the beneficent influence of a paternal and fostering care. Hence it came to pass that, while enough was done to dry up the sources of voluntary exertion, still but little was effected in comparison with the requirements of the case, while on all sides it was manifest that the Government and the public were but ill-disposed to remunerate medical men for their services in an adequate manner. Then it was that the evil of which we now complain commenced. The moment that charity ceased to be the sole guardian of the sick poor,—the moment that public boards, government officials, and local committees, took into their hands the superintendence and administration of medical relief,—that moment Mammon interfered and spoiled the goodly work. Medical practitioners had now to deal with hard taskmasters, who, misinterpreting the

motives of their former exertions, argued, that the labour so long gratuitously bestowed could always be commanded at a small price. Thus commenced the system of medical degradation, and from that period every year has witnessed an increasing tendency to curtail the salaries for attendance, and an increasing indifference with respect to the manner in which their duties were performed, provided always that they were performed cheaply. When at length a Board of Health, consisting of medical men, was appointed by the Government, it was hoped that the remuneration of the profession would be placed on a better footing: but, Sir, as soon as the constitution of that Board was known, many augured, and, it seems, augured truly, a very different result; for they argued that it did not embrace persons likely to struggle against the parsimonious determination of the Government, to extend to Ireland, with the new Poor Law, the debased system of medical relief which has so long disgraced the administration of that law in England. And but too truly has this gloomy anticipation been verified; for the cruel manner in which the poor have been treated during the present epidemic,—the gross neglect, on the part of the authorities, of their suffering,—and the paltry economy everywhere observable in the care of the sick,—has excited the pity, and aroused the indignation of the Press throughout Europe, to such a degree, as is remarked by the Editor of the *Times* (Sept. 8th), that the *Journal des Debats*, irritated at the failure of Narvaez at Madrid, avenges itself on England, by citing as shameful the conduct of the Government in not providing sufficient hospital accommodation for fever patients in Ireland.

“ After referring to the number of the Irish emigrants to America cut off by the ship fever, the *Debats* proceeds thus:

“ ‘ Such is the manner in which matters passed on the high seas and in the colonies. But in the mother country, in the centre of civilization, and in the immediate neighbourhood of the seat of wealth, of information, and under the eye of the Government, no doubt it is otherwise; no doubt, more attention is paid to preserve the lives of men; no doubt, thousands of human creatures are not abandoned to the ravages of fever and plague. We would we could say so, but we cannot. Moreover, it is not we who speak; we shall merely quote the lamentable relations which we find in the English and Irish journals. They are sufficient to excite pity in the most impenetrable hearts. We do not wish to use the word ‘indignation,’ because we believe that much has been done to alleviate the consequences of a terrible calamity; but by the picture drawn of the state of the population of Dublin, we may judge of what still remains to be accomplished in Ireland. It appears that famine, and all the evils which ensue from the most absolute poverty, have en-

gendered and developed in that country a typhoid fever of a special nature, which appears likely to furnish science with subjects of useful observation. We know that two distinguished French physicians, M. Henri Gueneau de Mussy, and M. Rodier, are at this moment in Ireland, for the purpose of studying this malady more particularly; and we do not doubt but that the description they propose to publish, will be equally interesting for political economy and medical science. We see in the Dublin papers that they have gone to see, in company with Dr. Curran, the provisional asylums established in that city to receive the fever patients who could not find a place in the over-crowded hospitals.' [Here follows a description of the sheds prepared for the fever patients in Dublin, which has already appeared in the *Times*]. The *Journal des Debats* concludes in the following terms: 'There is not room in the hospitals! The fever came too rapidly! And the beds have been suppressed! Such are the excuses offered to public clamour and to outraged humanity! We repeat that it is not we who speak,—it is not we who accuse. We do not wish to have the appearance of mixing the most remote symptom of political hostility with a question of pure humanity. We do not, in general, join in the exaggerated accusations made against England with respect to Ireland. But, if such facts appeared to pass with impunity, and if such scenes were suffered to continue, every accusation possible would be justified. We are happy to find, moreover, that the British press is doing its duty, and we trust that it possesses sufficient influence to cause justice to be done.' "

I rejoice that the public attention has been thus forcibly drawn to the miseries around us; it is well that the political jealousy of a neighbouring and rival nation should be the means of shaming the authorities into a more humane treatment of the sick poor. To admit the necessity and the justice of our thus receiving chastisement at the hands of foreign journalists is truly humiliating; but you, Sir, do not share in the blame, nor are chargeable with having contributed to this melancholy result, for you were one of the very first who with honest indignation struggled against the power of authority, and helped to raise the curtain which hid from the Public the doings of the charnel-house. As you were among the principal promoters of a public meeting of the medical profession, on the occasion of Dr. Curran's(a) having refused the appointment

(a) Since this letter went to press Dr. Curran died of typhus fever, contracted during his gratuitous attendance upon the poor. His premature and melancholy fate has excited the sympathy not only of his private friends, but of the public at large, and several well-merited eulogiums on his character have appeared in the daily and weekly journals. I rejoice to find that the present number of this periodical contains the memoir of the man, who, scorning to be purchased a cheap victim, offered himself as a voluntary sacrifice in the cause of humanity, and dared to rebuke our rulers, in an appeal so truthful, so powerful, that his lone voice crying for succour to the sick and the

of physician to a fever hospital, at a salary of five shillings a day, it may be necessary to explain the reason which induced me to withdraw my name from the list of those who summoned that meeting. Many who had the interest of the profession most at heart, and were capable of judging of the best course to be pursued under the circumstances, were of opinion that a memorial to Government was the most dignified, and perhaps also the more efficient method of proceeding; and, as was subsequently proved, the majority of the profession concurred in this opinion, the following memorial having been signed by upwards of one thousand one hundred practitioners:

“ TO HIS EXCELLENCY GEORGE WILLIAM FREDERICK EARL OF CLARENDON, LORD LIEUTENANT GENERAL AND GENERAL GOVERNOR OF IRELAND.

“ MAY IT PLEASE YOUR EXCELLENCY,

“ We, the undersigned Physicians and Surgeons in Ireland, beg leave respectfully to represent to your Excellency that the members of the medical profession in Ireland are frequently called upon to perform public professional duties for the benefit of the community at large, and that the zeal and efficiency with which those duties are discharged, together with their importance to the public welfare, eminently entitle that profession to the protection and support of the Government.

“ It is right to draw your Excellency's attention to the fact, that statistical returns for upwards of twenty-five years exhibit a fearful mortality from fever among the medical men of this country, and recent events have shewn that from the same cause we have to deplore the loss of many of the best and most efficient practitioners, who contracted typhus fever in the discharge of their duties among the sick poor.

“ We feel that the members of the medical profession have reason to complain that they sustain hardship and injustice when employed in the public service; as in some instances, from the imperfection of existing laws, medical practitioners are denied any remuneration whatever for such services, or are constrained to accept sums utterly disproportionate to the duties they are compelled to discharge; while in other cases, where the amount of remuneration is left to the discretion of Government, or to the award of officers in public departments, it is often unjustly and degradingly inadequate.

“ We most strongly, but respectfully, protest against the amount of remuneration offered by the Board of Health to physicians and surgeons for attending fever hospitals during the present epidemic;

dying, was heard through the length and breadth of the land, and excited the national indignation to such a pitch, that the authorities were shamed into more active measures of relief.

as, in some instances, five shillings per day have been offered by the Board of Health for the discharge of that onerous, responsible, and dangerous duty.

“ We need not enlarge on the importance and value of the services rendered to the country by the medical attendants of fever hospitals; neither does it seem necessary to do more than suggest that insufficient and degrading remuneration for professional services cannot fail to injuriously affect the public interests; and we confidently trust that your Excellency will take such steps as may, in your Excellency’s wisdom, seem fit to remove those grievances, and cause such remuneration to be awarded to the medical officers of fever hospitals and fever districts as may be commensurate with the great value and importance of the duties required of them.”

This memorial, together with the signatures, was forwarded to the Lord Lieutenant, then in London, in June, and the following answer was received on the 14th July, by which it appeared that the authorities in Ireland either felt themselves incompetent to decide upon this question, or had not powers to do so; and consequently they referred it to the Lords of the Treasury in London^(a):—

“ *Dublin Castle, 14th July, 1847.*

“ SIR,—I am directed by the Lord Lieutenant to inform you, with reference to your letter of the 9th instant, that by the Act 10 Vic. c. 22, the salaries of the medical officers appointed under the 9 Vic. c. 6, are subject to such regulations as may be made by the Lords Commissioners of Her Majesty’s Treasury, to whom, therefore, His Excellency has forwarded the memorial to which you refer.

“ I am, Sir, your most obedient humble Servant,

“ T. N. REDINGTON.

“ *To W. R. Wilde, Esq., 15, Westland-row.*”

And on July 26th, the following answer was received from the authorities in London:—

“ *Dublin Castle, July 26, 1847.*

“ SIR,—I am directed by the Lord Lieutenant to state that the memorial from physicians and surgeons, complaining of the rates of payment allowed under the temporary Fever Act, having been submitted to the Lords of the Treasury, their Lordships are of opinion

(a) The official letter to the Secretary of the Lord Lieutenant was signed, on the part of the memorialists, by their three secretaries, Messrs. Mollan, Williams, and Wilde; and the Secretary’s answer was addressed to Mr. Wilde, one of the three secretaries: at this side of the water, therefore, every thing was done *selon les regles*: not so in London,—for the answer of the Lords of the Treasury was addressed to Mr. Cusack, who had *not had any communication whatsoever with them!*

that the remuneration is as high as, under the circumstances of the case, they should be justified in granting.

“ I have the honour to be, Sir, your obedient Servant,

“ T. N. REDINGTON.

“ *J. W. Cusack, Esq., M.D.*”

The brevity of this is unquestionable; but it is certainly not very flattering in its manner, or condescending in its style. Surely a memorial upon so important a matter, signed by upwards of eleven hundred gentlemen, many of whom had risked their lives in the performance of their duty, and several of whom have since fallen victims, might have received a more courteous reply. And indeed it is to be presumed that, had not the authorities been swayed by some sinister influences, they would have deigned to have given, if not a satisfactory, at least a respectful and civil answer. They might have said that they had duly considered the prayer of the memorial,—were quite acquainted with the respectability of the parties who signed it,—were aware of the sacrifices they had made in discharging their public duties, and the great labour which those duties required. All this might have been said with perfect truth, and such an answer would have had the advantage of not being so laconic as to be actually insulting,—although the authorities might have refused, on the plea of the state of the public finances, to comply with what they must have confessed to be at least a respectful and a reasonable demand. It is idle to suppose that the gentlemen composing the Board of Health were not cognizant of this answer before it was communicated to the memorialists. Nay, it may be assumed as fact that the answer was shaped according to their wishes and suggestions, and accordingly we have every right to hold them responsible for a reply, the style of which is more suited to the mere executive instrument of an absolute government, than to the responsible minister of a constitutional monarchy.

You, Sir, as well as myself and others, have felt poignantly the necessity which obliges us not only to differ from, but to censure the conduct of Sir Philip Crampton in particular. Sir Philip has been now nearly half a century an hospital surgeon in Dublin, having been elected surgeon to the Meath Hospital on Friday, the 28th of September, 1798(a), and during that

(a) It may be consoling to Sir Philip to learn that in measuring his useful labours by the half century, I am only doing for him what was done for myself by my German translator, Doctor Bressler, in 1843, with this difference, however, that the honest German has ascribed to me an age truly Nestorcan. In the preface, among other handsome things, Dr. Bressler

long period of time no man has been more active than Sir Philip in ably discharging both the private and public duties of his profession, and no man has educated a greater number of pupils, or delivered more instructive and attractive introductory lectures in the theatre of the Meath Hospital.

We all remember the brilliant addresses delivered by Sir Philip Crampton; the spacious lecture-room used then to be crowded to excess, the benches being occupied by students, most of whom, as was evident from the freshness of their complexions, and the provincial intensity of their curiosity, were recent arrivals from the country; while the reserved seats were filled by the most distinguished members of the medical and surgical professions, one or two of the nobility, and an occasional bishop.

None of us can forget how eloquently the Lecturer impressed upon his audience the utility of true medical science, as distinguished from mere empiricism; and how clearly he proved that it is impossible to obtain skill in the treatment of disease, without devoting year after year to patient labour in the laboratory, hospital, and dissecting-room. How earnestly used he to exhort the listening students to devote themselves to the cultivation of the accessory branches of knowledge! How awfully used he to depict their future guilt, if they neglected to study disease and its treatment! How skilfully did he enlist their interest by the introduction of some of the sublime truths of physiology; and which, by a method of illustration peculiarly his own, he made intelligible even to a Chief Secretary of State for Ireland? Would that it had been possible to daguerreotype the lecturer and audience at the moment he had achieved this triumph of art over nature! Alas, Sir, imagination cannot depict, nor can memory restore, such a scene; but how suddenly would a change have come over the spirit of their dreams, had he informed the anxious students at what price the bright reward of their dangers, toils, and privations was to be estimated by himself at a future day,—not, forsooth, the *honorarium* which he himself receives for every half-hour, the exact sum mentioned by Tacitus as the reward of victory, the guinea, the sovereign and the shilling, the *Aurum et argentum pretium Victorice*,—but the miserable crown a

says of me: “*Graves hat in diesem Werke die Früchte einer langjährigen Erfahrung niedergelegt, &c., &c., und uns gleichzeitig inne werden lässt dass er, der greise Arzt,*” &c., &c. I need not translate this accurately, but the general meaning is, that Doctor Graves is a venerable physician, one who has long passed his *prima et recta senectus*, and whose experience commenced before the majority of his readers were born.

day ! Would not this peroration have obliterated all the effects of his previous eloquence, and have dispersed the crowd, before he had arrived at “ *Vos plaudite.*” In truth, Sir, and I say it with pain and regret, Sir Philip Crampton has lost the finest opportunity that ever a medical man enjoyed, of increasing the honour and dignity of his own profession, and at the same time upholding the cause of humanity in Ireland.

I am free, Sir, to confess that, from the moment the names of the members of the Board of Health were announced, I felt little confidence in its composition, and I augured unfavourably of its future operations. The present Government is not responsible for the appointment of this Board, the nomination having been made in 1846 by the then Secretary of State for the Home Department, Sir James Graham, during the premiership of Sir Robert Peel ; and I may fearlessly assert that neither the public nor the profession in Ireland, or in England, anticipated a Board composed of these three medical members, and excluding Sir Henry Marsh, the then President of the College of Physicians, Dr. Stokes, Mr. Cusack, Mr. Carmichael, Dr. Croker, Mr. O’Ferrall, Mr. Kirby, Mr. O’Reilly, Dr. Hutton, Mr. Adams, Dr. Mollan, and many others whose names are long familiar to the public as persons connected with the management of hospitals and the treatment of disease.

It is but fair to observe that Sir Robert Kane cannot be held accountable for any of the acts of this Board, for his other occupations are so numerous and important as to render it quite impossible for him to attend to its duties : and besides, it may be remarked that, though a member of the College of Physicians, Sir Robert Kane has long since withdrawn himself from everything connected with practice. His name is an honour to the list of Fellows of that College, and his scientific labours are there justly appreciated ; but certainly in that body he would not be selected by his colleagues to perform a duty such as that which devolves on a member of the Board of Health : and in truth the College of Physicians felt naturally most indignant when it became known that neither its President, Vice-President, nor any of its other members, were appointed to the Board of Health. I believe the same feeling was general in the College of Surgeons, for although Sir Philip Crampton happened at the time to be President of that body, it is well known that he was not selected on that account by the Government, all other members of the body being passed by.

As to my friend Dr. Corrigan, no one will deny his ability or industry, but many will doubt his wisdom in accepting the

amount of responsibility which has necessarily devolved on him ; for during Sir Philip Crampton's absence in London and Sir Robert Kane's uniform non-attendance, Dr. Corrigan was for many weeks *The Board of Health*: and, consequently, neither the College of Surgeons nor the College of Physicians was represented at that Board. Now, Sir, however Dr. Corrigan's vanity may have been flattered by this state of things, it was by no means satisfactory either to the profession or the public ; and even those who were best inclined to the learned gentleman, and most disposed to judge kindly of his actions, even they, I say, felt that he was not wise in maintaining a position in which the laws of physics were reversed, and the whole weight of the profession revolved *outside* the Central Board.

But Dr. Corrigan may be excused from becoming a little giddy when he ventures into the same car with Sir Philip, and, to the amazement of all, suddenly finds himself at an altitude so elevated, that his companion, although a veteran aeronaut, betrays distinct evidence of alarm. Indeed, it appears that, even when Sir Philip Crampton was in Dublin, Dr. Corrigan was *the Board of Health still*, or rather two-thirds of that Board, as is proved by the following return elicited by some observations made by Mr. David C. Latouche, published in Saunders's News-Letter of September 25th :

“ From this return it appeared that from the 31st of March to the 14th August, 1847, Sir P. Crampton had attended forty-two meetings of the Board ; Dr. Corrigan, eighty-seven meetings ; Sir Robert Kane, two ; and Mr. Twistleton, twelve meetings.”

Dr. Corrigan certainly deserves much praise for his diligence ; but surely the Government did not act wisely in so constituting the Board that it became a nonentity the moment he ceased to attend.

Now when we call to mind that Dr. Corrigan's numerous avocations as a lecturer, an hospital physician, and a practitioner of considerable repute, must ingross a great deal of his time, we begin to tremble for the very existence of the Central Board of Health ; but we need be under no apprehensions on the subject, for it appears to be *proven*, that the learned Doctor, no matter wherever else he may be, *is always there*, in virtue of a miraculous *ibiquity* !

In the Freeman's Journal, 22nd September, 1847, an account is given of a meeting of the South Dublin Union Sanatory Relief Committee. In it we find that Mr. David C. La Touche said,

“ That he had frequently visited the Board of Health, *and invariably found that the only member who attended was Dr. Corrigan.* He was fully sensible that the Board of Health was a very inefficient body. If they had an effective Board of Health the state of the prevailing epidemic would be very different from what it was at present.”

The following letter from Mr. Latouche to Sir Philip Crampton may be very satisfactory to the honourable Baronet, but it contains matter so condemnatory of the Board, and, consequently, of the Government who relied on it, that I much wonder at his allowing it to be published; but, no doubt, his discretion was overruled by the ardour of his self-defence, for it appears from this letter that when Sir Philip was away all went wrong!

“ *Castle-street, 24th Sept., 1847.*

“ MY DEAR SIR PHILIP,—I had already complained of the manner in which what I said at the meeting of the South Dublin Relief Committee on Tuesday last was reported, and it is my intention to do so at the meeting to-day. So much depends on context that it is impossible without hearing it to judge accurately of detached expressions. I have no doubt that I said what amounted to the substance of what has been reported; but as only two or three expressions made use of during a long discussion are reported and put together out of their natural connexion, a totally erroneous colouring has been given to what I did say. I can assure you that nothing was further from my intention than to impute blame individually to you, although, from the way what I said is introduced, it would appear that you were aimed at. I thought, and still think, that the Board of Health has not been by any means as efficient as it ought to have been, and that its constitution is defective, the members having offices and occupations which render it impossible for them to give the needful attendance; but I believe that when your health permitted you to attend you were by far the most useful and efficient member of it. I did state that I seldom found any one there but Dr. Corrigan, and such is the fact. I also stated that he was frequently not there till after five o'clock, the regular office hours being half-past four o'clock in the afternoon, and I complained of this. I perfectly recollect that on the two occasions you mention I met you at the Board; indeed I went there because I knew you were there, and you at once overcame difficulties that were raised by other members, and facilitated the business I came upon. I regret that, from the manner in which it appeared in the newspapers, I seem to have volunteered an attack on persons who were absent, when in fact what I said was drawn out by what was passing at the committee; and I expressed my opinion freely, and perhaps without sufficient consideration: at the same time I cannot recollect having said anything inaccurate, or that, if the context were given, could cause you any uneasiness.

“ I am very much obliged to you for taking the trouble to write to me on the subject, and am, my dear Sir Philip, your's very sincerely,

“ DAVID C. LATOUCHE.”

Those who are aware of Mr. Latouche's abilities, and the zeal he displays in the discharge of the many benevolent duties he undertakes, must feel that this letter is a *heavy blow and great discouragement* to the Board of Health. As Dr. Corrigan *was always there* when Mr. Latouche went to the Board, it is quite clear that even his punctuality and capabilities for transacting business are seriously impugned by Mr. Latouche's explanatory letter, in which the writer endeavours to throw some of the blame of raising unnecessary difficulties off the shoulders of Dr. Corrigan, by using the expression, “ *difficulties that were raised by other members.*” But Mr. Latouche's good-natured politeness cannot, Sir, prevent us from remembering that on the previous meeting of the Relief Committee his testimony was quite clear as to the fact that Dr. Corrigan *was the only other person he ever found there*; and, consequently, the weight of Mr. Latouche's implied censure falls on Dr. Corrigan, and must prove to him anything but galling, that weight having been shifted to the learned doctor's shoulders with infinite grace, ease, and adroitness by his colleague!

The appointment of the present Board of Health was evidently impolitic on the part of the public authorities. Those who found public institutions, such as the College of Physicians or the College of Surgeons, should not be the first to proclaim their inutility. What is the use of having a Royal College of Surgeons, or a King and Queen's College of Physicians, if Her Majesty's ministers publicly repudiate their functions? Would a proceeding like this be even tolerated in London?—would it be ventured on? Most undoubtedly not. Such exhibitions of unconstitutional proceedings are reserved for Ireland. I say unconstitutional advisedly; for every act of Government which annuls the recognised functions of public bodies without an Act of Parliament is an act revolutionary in spirit.

In previous epidemics, and particularly during the outbreak of cholera, such was not the line of conduct pursued by the Government. Why, then, were unusual means had recourse to on the occasion in question? Why was the Board of Health, which is still in existence, and composed of physicians and surgeons belonging to the two Medical Colleges, passed over(*a*).

(*a*) In the year 1801 an epidemic fever of great extent and mortality pre-

Bad as the conduct of Government and the Board of Health has been, the defence set up by them or for them is still worse; for the *Evening Post*, the organ of Government in Dublin, has not scrupled to charge those who signed the memorial with having done so for the purpose of embarrassing Government on the eve of the then approaching elections.

The articles to which I allude are headed "Election Cry of the Doctors," and form two lengthy leaders of several columns in that newspaper. They contain some matters of minor detail, to which I shall draw attention at another time, but as

vailed in Ireland; there was no Board of Health at that time, but the Army Medical Board, at whose head was Dr. Renny, were the chief advisers of Government.

In 1818 a Central Committee of Health was appointed by Government. Of this Board, the late Dr. Robert Perceval was chairman; the members were composed of physicians to the principal hospitals, with some of the managers and governors of these establishments, viz. : Drs. Perceval, Cheyne, Taylor, Stack, Barker, with Mr. Harding and Mr. Adair. This Board was not paid. It was dissolved in the following year.

For further information of all proceedings for relief of sufferers in that epidemic, see the published authorized account by Drs. Barker and Cheyne.

In 1820 the *General Board of Health* was constituted. The number of its members was fourteen, of whom five were medical. They were selected from the principal medical attendants of Dublin hospitals, and from those managers or governors of hospitals who were men of business. This Board still exists. None of the Members of this Board were paid, except the Secretary, Dr. F. Barker.

By this Board the proceedings adopted for the relief of sufferers from fever in the west of Ireland, when fever prevailed there epidemically in 1822, were advised and managed. In the year 1826 also, when fever prevailed to a most unusual extent in Dublin and its neighbourhood, temporary establishments were formed and beds provided in these to the number of 1378, its arrangements were made by Government under the advice of the same Board.

When cholera visited Dublin in 1831, 1832, the primary arrangements for its prevention and treatment were made by that Board; and Reports printed and largely circulated, before and after the appearance of that disease.

Boards of Health were then regularly constituted throughout Ireland, as prescribed by law (58 Geo. III. c. 47). Their number amounted to nearly 600, and Reports from these Boards were embodied in a tabular form, and transmitted to Government by the General Board of Health.

From the increase of cholera in the country it was soon deemed advisable to have a Board in Dublin, limited in its operations to cholera; accordingly, a *Central Board of Health* was formed. Its members were, three physicians, Dr. Crampton, Sir James Murray, and Dr. Barker, its secretary, with Mr. J. M. Pike and Mr. W. English, members of the managing Committee of the Cork-street Fever Hospital. The members of this Board were paid. It was continued for about one year, or until the cholera had evidently declined; it was then dissolved, and its business transferred to the General Board of Health.

The circumstances of Dublin during the presence of cholera, the panic which prevailed, and the extraordinary exertion deemed requisite to meet such a plague, called forth the appointment of another *Board of Health for the City of Dublin*, constituted under the 58 Geo. III. c. 47, and vested with the powers conferred by that Act. It consisted of thirteen members, selected

their chief object was to make the Public and the Government in *England* believe that some party or sectarian motive was the mainspring of this respectful and *unpolitical* representation, I shall confine my remarks to that part of the subject on the present occasion.

This organ of the Government and the Board of Health says that it is

“Sorry to see them,” the profession, “come forward at such a time and in such a guise, exhibiting themselves in the attitude, on the one hand either *as combinatorers for a rise in wages, or, on the other, as whining suppliants for a dole of public money.*”

from the most influential professional, mercantile, and private individuals of the city, viz., the Lord Mayor, John David La Touche, Sir Wm. De Bath, Bart., Sir John K. James, Bart., Sir George Morris, Sir Henry Marsh, Bart., J. W. Cusaek, M. D., Leland Crosthwaite, Esq., B. B. Smyth, Esq., &c., with Dr. F. White, the present Inspector-General of Lunatic Asylums, for their secretary. The members of that Board were unpaid; the secretary received a salary. It was continued during the extensive prevalence of cholera, and was then dissolved, as the Act, 58 Geo. III., under which such Boards are formed, directs, and its business was transferred to the General Board of Health. The entire hospital arrangements for the city of Dublin devolved on this Board, and the following was the plan they laid down and carried into effect,—a plan which, both for its efficiency and the scale of remuneration to the medical officers employed, stands forth in marked contrast with the regulations of the Board now existing:—they appointed a chief physician to each of the hospitals, at a salary of three guineas a day, and an assistant or junior physician at one guinea a day, both of whom resided at the Hospital; and physicians were also appointed as district inspectors at one guinea a day each. When cholera was subsiding, and the duties much diminished, the fees were gradually lessened also; but this Board never recognised the principle of allowing a remuneration so low as five shillings a day; and when they did lessen, a certain sum was given to each physician on the breaking up of the staff. The payments to the medical officers made under the authority of the Board, were advanced by Government, but were repaid by grand jury assessments.

No Board has been formed in Dublin since that time until March, 1846; Reports to Government on the progress of disease, and advice as to its prevention, being made periodically, or as occasion required, by the General Board of Health, until the 9 Vic. c. 6, was passed, 24th March, 1846, to meet the epidemic disease now so widely spread through most parts of this country.

In 1819 the four provinces of Ireland were inspected by Drs. Cheyne, Crampton, Clarke, and Barker, and reports made by each of them, which were afterwards printed in the Report of the Select Committee of the House of Commons on the state of Disease in Ireland. These medical inspectors received four guineas per diem, and their expenses were also defrayed.

The physicians of the Fever Hospital in Cork-street received gratuities for their additional services performed during the extraordinary prevalence of fever.

On the application of a Board from the country for medical aid, the local Board engaging to pay the physician sent down at the rate of two guineas per diem and travelling expenses, a medical gentleman was sent down by the Central Board of Health. All expenses of this kind were repaid to Government by grand jury assessments. Many physicians were sent down to local Boards in the country and at the time remunerated at that rate.

“We thought it at first strange that this ‘Confederation,’ or ‘Representation,’ or ‘Botheration’ (we beg pardon, but being of a poetical turn, and all, including ‘Conciliation,’ rhyming together, we are always confounding them),—we thought it strange that, instead of confining itself within the legitimate course of remonstrance with the Board of Health and the Government, which would appear to be the plain and obvious course to pursue, it should for some time past, in periodicals and papers, have laboured to throw odium on the Government, and to damage it in the eyes of the whole profession, and as much as possible in the estimation of the public. We thought this a strange course of proceeding; we began to think (we could not help it) that there was more in this than met the eye, and we could not resist the conclusion which has finally grown upon us, that consideration for the ‘hardships and injustice sustained by the profession’ formed a very small element in the agitation, and that one of the main objects was to make use of the alleged grievance as a means of exciting the opposition of the profession against the Government in the approaching general election.”

And again it adds:—

“A party motive would be, just now, less unworthy than a mercenary feeling. The prostitution of the profession for party purposes may be but blindness; but its occupation at the present time, by a mercenary spirit, would be deep disgrace.”

At the time these articles were written Sir Philip Crampton was in London, and, therefore, the arguments and spirit must have been derived from some other source. The editors of newspapers are necessarily supplied with materials by those whose cause they undertake to defend, and consequently the indignity thus offered to the profession is imputable to some other member of the Board of Health than Sir Philip Crampton; at all events, not a single member of that Board has come forward to disavow the authorship of a charge which is on the very face of it false, for the memorialists count among their numbers all shades of political and religious opinions, and consequently could have had no such object in view.

We have a further proof that from the Government or the Board of Health emanated these articles so abusive and insulting to the medical profession, in the fact that they contain matter which was only within the reach of the official authorities.

The assertions of the *Post* have been already ably answered in several periodicals, particularly in the *Lancet*, to the spirited support of which, during the late crisis, the medical profession in Ireland is in an especial manner indebted. The accusation of the *Post* was completely answered in the *Even-*

ing Packet, and the Nation has also raised its powerful voice in defence of the honour and dignity of eleven hundred Irish gentlemen. The *Lancet* of the 17th of August writes:

“The Dublin Evening Post, under the guise of defending Messrs. Crampton, Kane, and Corrigan, continues its vilification of the medical profession, growing, as might be expected, more and more abusive as its arguments become less and less weighty. It first attacked the Irish Representation as an ‘Electioneering cry of the Doctors;’ and it now refers to it in its pages as ‘The Doctors’ Dodge.’ The articles of the Post have been not merely replied to, but fully answered, by the Evening Packet and the Nation; but the Post is so pugnacious that it still clamours for new opponents.

“We are ashamed to say that the first article of the Post was written in consequence of a letter, published in its columns, from Dr. Brady, a member of the Irish College of Physicians, taking part with the members of the Board of Health against the eleven hundred medical men who signed the Representation to the Lord Lieutenant, protesting against the payment of five shillings a day for attendance on fever hospitals. Dr. Brady termed the protest, signed by nearly every man of note or eminence in Dublin unconnected with the Board of Health, a ‘combination amongst the members of the medical profession with a view of obtaining increased and unusual remuneration;’ and argued the matter just as he would have argued a strike for wages amongst mechanics or day-labourers. The respectful demand for just payment for the most dangerous services which can be rendered to the State, was, to Dr. Brady’s ear, ‘a growl of discontent,’ and remarkable as ‘the first occasion on which the medical profession of this country has exhibited a mercenary disposition.’ Dr. Brady has been, we believe, a gratuitous lecturer, and, as we are informed, is one of four or five medical men in Dublin who have had the temerity to run the gauntlet of professional opinion, and embrace the degrading offer of the Board of Health. He had previously accepted three shillings a day from another Board, and was, therefore, in no position to criticise as mercenary growlings the remonstrances of those who knew better what was due to themselves and their profession.

“The misrepresentations of the Post, in designating the movement in the medical profession as political in its character, is almost too absurd to be dealt with seriously. The Representation was signed by men of all parties and all ranks in the profession, among whom combination for any political purpose whatever would be impossible. We say the question of a just remuneration, the sense of insult and degradation to the profession, were the only motives that could have banded together so large a number of medical men. The wrath of the Post is unbounded that just at this particular time justice should have been demanded by the profession. Because in times past medical men have performed their dangerous labours, and

taken the miserable pittance awarded by Boards and Governments, our Dublin scribe would hold to it as an everlasting precedent that in all times and seasons, under every change and circumstance, medical men should suffer the injustice to go on unquestioned. Let the organ of Messrs. Crampton, Kane, and Corrigan, argue the question upon its real merits; let the Post take the dangerous duty required of the medical men *as it is*, without these foolish lookings before and after, and let it say whether five shillings a day is or is not a fair and just payment for such services from such a body as the medical profession of Ireland. Then we shall know how to deal, in our turn, with the Board of Health; for the profession is bound, in self-defence, to identify the Board with its official defenders, and to hold them responsible for its principles. We acknowledge that medical men have taken five shillings a day on other occasions; we acknowledge that they have received even less than this for services the most onerous and important. But we do not admit that the scale of payment was just, and that it was such as could never be agitated against without incurring the abusive attacks with which the profession has been favoured by the official organ in Dublin. We acknowledge that the times have been when Sir Henry Marsh and Drs. Kennedy, Stokes, Law, Osborne, Croker, &c., have ‘served in former epidemics, in 1826-7 more particularly, for sums varying from two shillings and sixpence to five shillings a day.’ If these gentlemen had, in 1827, openly protested against such degrading remuneration, they would but have done their duty to themselves and to their profession; and when they, one or all, join in the protest of 1847, they are but fulfilling the highest duties that can bind a medical man. It seems absurd to find a political organ basing its defence of a public wrong purely upon precedent, when the very existence of that organ depends on its general advocacy of political and social progress. The profession desires to emancipate itself from what it feels to be a grievous wrong, and it is told that because it has once, or on certain occasions, silently submitted to it, it must do so for ever. If the Dublin Evening Post wishes to make itself further ridiculous, let it adopt the same line of argument upon the political topics of the day. It would soon be brought round to common sense or a stand-still by its contemporaries. We declare the only two ideas of the Post upon this subject to be, the misrepresentation that the movement is political, and the would-be argument derived from bad precedents.”

The Lancet, in allusion to what it styles “the vulgar vapouring of the Post,” asks:

“Why should it not grapple with the articles of the Evening Packet? Why does not the Post itself reply to the following, which contains the pith of the whole matter:

“‘It is true that many men, now eminent in the profession, acted in 1827 and prior epidemics for five shillings per diem; but was this grievance the less felt twenty years ago because men had

not then the means for making their complaints known to their brethren, the Public, or the Government? How many grievances have existed with the precedent of centuries in their favour (but with the feelings of millions against them) until remedied at the fitting time? Precedents in favour of injustice come with a bad grace from a Government the offspring of reform; precedent is no argument for wrong, nor submission a pledge to support. It may be, and has been, an encouragement to tyranny that men have once submitted; but the act of submission gives no guarantee that the evil is to be submitted to for ever. Is there any reason why men who, in former years, may have been coerced into submission to a grievance, should on that account be now debarred from aiding their brethren in the endeavour to resist its re-infliction? The arguments used by the Post on this subject are utterly worthless, for they tend equally against all reform.

“ ‘ We might go over in detail the allegations of the Post, were they not so manifestly without foundation as to render refutation unnecessary; but with the style and manner of its comments on the acts and principles of a profession so deservedly respected as the medical, and on men who hold so high a station in the country as these who promoted this movement, we cannot observe a similar silence. Although we were long accustomed to the official insolence of a dog in office, we were not prepared for the uncalled-for volume of abuse poured forth against a respectable body of gentlemen by the Dublin Evening Post, which has denominated them “ combinators for a rise in wages;” and “ whining suppliants for a dole of public money;” which has stated that they “ want common sense;” that their remonstrance is a “ botheration;” and that the gentlemen who got up this memorial “ would drag their dupes through a political mire, and make them blindly subservient to their own party purposes;” with other similar unjustifiable expressions which we need not quote.’

“ ‘ Or if the popular principles of the Evening Packet be too conservative for the liberal Post, we commend it to the tender mercies of the Nation newspaper, in which the just rights of the profession are eloquently maintained, and the following contrast made between the Dr. Corrigan of private life and the Dr. Corrigan of the Central Board of Health; between the ‘ Parliamentary evidence’ and the Board of Health ‘ scale of remuneration to medical officers.’

“ ‘ But twelve months since, or so, under Tory rule, he (Dr. Corrigan) published a *brochure* on Fever as the Complement of Famine. In that he protests, in the strongest manner, against fever hospitals (temporary or other) being built in connexion with poor-houses. He shews its effects in the spread of the disease, and, with great humanity, declares disease should not be made a chain to drag a man into the workhouse. But, then, Dr. Corrigan did not *diagnose* the Whigs; he had not, as yet, felt the pulse of an Excellency. However, since he has done so a new light has burst on him, and closed his mouth. In every part of Ireland, for the last six

months, fever hospitals have been erected in connexion with,—generally speaking, on the ground with,—the “poorhouses;” and every frightful consequence predicted by Dr. Corrigan has occurred. Yet Dr. Corrigan, since he published his pamphlet, has been in the “Board of Health;” and, being there, he felt the viceregal pulse, and held his tongue.

“ ‘Nay, his whole principles are changed. If we wish for a handbook on medical legislation,—on the rights and duties of a profession which is behind none in learning,—which, since Bacon’s day, has led the van of human science, impelled by charity and the true student’s enthusiasm; if we wished for a great example of the practical minuteness and broad, grasping mind of our native practitioners, we would point to Dr. Corrigan’s own evidence before the English Parliament. By that one can see how destructive to the lives of the people, injurious to science, and degrading to the profession, and every member of it, is the rate of medical payment, prior to this year, followed in Ireland. But, put the man in office himself, change his point of view, immerse his head in a cocked-hat, the member of the Board of Health forthwith sees in the bad precedents an example to be followed, and becomes a partner in the insulting offer, to the members of his own profession, of five shillings a day as State payment, for constant fever practice, in sinks of contagion whose destructive atmosphere no man knows better than he.

“ ‘Now, we especially notice Dr. Corrigan in this matter, because, in the year ’46, before there was a single typhoid case, he predicted boldly, and, as we then thought, nobly, all the hideous results which have since followed. We confess we relied on him, more than on any other man in Ireland, for protection to the people. We knew he had the power; we thought he had the will. We hoped to see the war which he began as boldly and as nobly maintained. We hoped that, through him, the Irish profession would raise itself from the political apathy natural to its position, and tell the English Government, to its very beard, it should not murder. Nay, we hoped to see him lead on that profession in a bold, honest, national movement, independent of all foreign influence, to save present life, and protect from physical deformity and mental decrepitude generations to come. But look you, hardly had the last sheet of his promising *brochure* escaped from the press, when a huxtering Board,—a Board of “*Health*,”—a listless triumvirate to give contagion its fling,—was got up, of which he was one. His science and his humanity thereafter “went by the Board.” The triumvirate was totally inoperative. The Act which formed it was a sham, and an intentional sham. And after an idle, useless existence of twelve months, when contagion had spread over the whole land, when the public voice shouted, “where was the Board of Health?” it modestly declared its existence, and that it could do nothing. Whereupon the sham Act was amended. The triumvirate was empowered to appoint medical officers to new fever hospitals, or to districts requiring domiciliary attendance. And lo! forth it comes with its

scale of prices for the greatest amount of medical ignorance, coupled with the coolest medical presumption.

“ ‘ This proclamation at the Castle mart was ineffectual. Irish honour was not in sufficient abundance in the market. The sham bill, to amend the sham, would not do. Whereupon the Whig Government threatened, through the triumvirate, to send over a corps of state doctors from England, wisely adding another corps of sappers and miners to bury the additional dead consequent on the coming of the former. Yet this seemed dangerous; and a new plan to carry out the insult was adopted. The five-shilling commissions were sent to individuals in order to press them into the service. One gentleman, whose name we cannot couple with terms of sufficient respect, Dr. Curran, of this city, flung back the degrading offer in the triumvirate's teeth; and, to prove the unselfishness of his conduct, has, we are informed, without fee or emolument, ever since discharged the duties of a dispensary doctor in a densely populated and unhealthy locality. A spirit,—would to God it had been exhibited twelve months ago!—revived in the profession. A respectful but firm remonstrance to Lord Clarendon was adopted, and presented to that personage with *one thousand and sixty signatures attached*. We point with a national pride, and still with sorrow, to that array. Men of European fame, whose opinions dictate to life in the schools of Paris and of Germany,—men who still have preserved, for Ireland, the foremost rank in surgical and medical science,—men of all religions, of all politics, stood together,—an Irish profession at last. And the treatment they received was befitting an Irish profession. First, an official note from Mr. Redington informed them that their dignity and their interests were not in his hands, but in those of the English “Lords Commissioners of Her Majesty's Treasury.” And then another as coolly informed them that “their Lordships” (their English Lordships) are decidedly of opinion that the “remuneration was as high as, under the circumstances of the case, they were justified in granting.” ”

Here follows the Answer already quoted.

“ Such was the answer received from the Lords of the Treasury to whom the Representation of eleven hundred educated medical practitioners was phoo-phood by the Irish Government. Unless justice could have been awarded to the profession, the members of the Board of Health, Sir Philip Crampton, Sir Robert Kane, and Dr. Corrigan, should have resigned their posts, and given to other and to non-medical hands the labour of degrading the profession after its formal remonstrance. As it is, these gentlemen, for the present, hold their seats; but they have embittered themselves with the vast majority of their profession. They will find, in the end, that they do not please either party; for governments have a singular tendency to turn their backs upon unpopular servants whose acts and deeds are before the Public. Even now they are bound to resign their appointments; or to shew that five shillings per diem is

a just and honest remuneration to offer to educated professional men on a service more fatal than any war service in the world; or else they must take the universal reprobation of their brethren."

Another argument used by the Post for the *five shillings* remuneration, is that the present Board of Health was only following former precedents. But if a precedent be of any value, it is only so far as it is good in itself, and only so far as it is worthy of adoption on its own merits. If bad precedents were to be followed, an error once adopted would become perpetual; injury would follow injury; injustice would beget injustice, and regeneration become impossible. But although precedents may be found in favour of the tariff proposed by the Board of Health in the year 1826, yet it should not be forgotten that, during the invasion of the cholera in 1832 and 1834, Government contended against the evil with all the forces of the Empire—*totis viribus regni*. During that year hospital accommodation was provided, sufficient to allow the admission of every poor patient, and that at a time when from sixty to one hundred sickened daily in this city; and physicians, apothecaries, and nurses, were liberally remunerated for attending the sick in all parts of the island, wherever the epidemic raged,—the former at a salary of two guineas a day.

Have the duties performed by the Board of Works been more important than those intrusted to the Board of Health? Assuredly not. And yet it appears by the returns that they had many thousand officers employed at an enormous expense; and of these thousands thus employed, I question whether a single individual was upon so low a salary as five shillings a day, no matter how unimportant the duties he had to perform, whether it was to carry a chain for a surveyor, or weigh out Indian meal to the hungry. It is objected that the question of remuneration should not be raised during the present calamity. But it is only in such a crisis as this that the services of medical men are needed. And of these services what is the reward? They labour, toil, and peril their lives; they perish and fall victims; and how are their families requited? What honour consecrates their memories? What prizes reward their success? A short paragraph in the paper, announcing, in a manner so frequently repeated as to have become formulized, their decease in consequence of disease contracted in the discharge of their duties. But the Public are now hardened; they feel no sympathy when they read such an announcement; and they think that all M. D.'s have a right to die for the benefit of the Public. Within our memory the Govern-

ment has interfered but once in favour of the family of a physician who thus fell a victim in struggling against epidemic fever. Dr. Browne, of Galway, was the instance to which we refer. He was a single man, but the Government of the day gave annuities of £50 a year each to his brother and sister, who are still alive, and in receipt of the sums. Our esteemed friend, the Editor of the *Dublin Evening Post*, is well aware of the facts of this case; and we hope that he will exert his talents in pressing on the Government the necessity of succouring the families of the many physicians who have died during the present epidemic.

Until the publication of the valuable paper by Drs. Cusack and Stokes in the last Number of your Journal, the Public were quite unaware of the great extent of danger which attends the practice of the medical profession in Ireland.

It can scarcely be doubted that, as soon as the knowledge of the facts disclosed in that paper becomes familiar to the Public and to the Government, they will no longer leave the families of medical men who die in consequence of contracting fever in the discharge of a public duty, unprovided for; or that any Government or Board of Health will dare to propose again such a tariff of remuneration as has in the present instance excited the indignation of the profession and of the Public. The education of a physician is laborious, tedious, and expensive; the practice of his profession is dangerous; the reward, in private practice, uncertain, and in the discharge of public duties, almost none. And consequently, under the present system, the number of well-educated, scientific, and skilful men, who will undertake the duties of attending the sick poor, must diminish every day; and the end of the system will be, that the poor man shall receive advice and medicine for which little or nothing is paid, and from which little or no benefit can be derived. There are those who refer to the system of medical relief in the poor-houses and poor-law unions of England, as a precedent to authorize the low rate of remuneration now adopted by the Board of Health and the Government. But the Public even in England are beginning to be painfully aware that they have disgraced themselves in the eyes of Europe by intrusting the lives and health of the poor to the lowest bidder. The consequences have been most blighting to the finest feelings of human nature, and there is much reason to fear that the masses of society in England are already seriously demoralized by this system. This sad conclusion seems to follow inevitably from the facts connected with the death of the poor orphan Duigenan,

concerning which, Sir, I feel too strongly to allow myself to speak, and therefore I prefer quoting a paragraph from the *Daily News* respecting that sad tragedy:—

“ A searching inquiry will, no doubt, be instituted into the circumstances in which two Irish paupers, removed from the Rochdale Union, met their deaths on board the steam ship *Duchess of Kent*, on the voyage between Liverpool and Dublin.

“ Assuming that the statements which we have recapitulated are true,—and we fear there is no ground to doubt them,—they display a most culpable indifference to the sufferings, and even disregard of the lives, of the poor. The worst of the case is, that the indifference and disregard appear to be part of an extensive system.

“ There is a shocking callousness in the haste with which the authorities of the Rochdale Union appear to have transferred an orphan lad from the wards of a fever hospital to a third-class railway carriage on a rainy day, and to the deck of a steam-boat on a stormy night, while he was yet so feeble from the effects of his illness that he could not sit unsupported in the carriage, and had to be carried on board the boat. But the consequences of this heartless conduct were aggravated by the concurring inhumanity of many others. The reckless way in which the unions throughout Lancashire hurry off their return paupers is the cause why the deck of the vessel was so overcrowded that people were lying on the top of the dying boy, and that he was apparently ejected from the imperfect shelter of the stable. The guardians and officers of the Rochdale Union form but a small section of the crowd against whom the presumption of inhumanity presses so strongly. And the municipal authorities of Liverpool, or the managers of the docks, cannot be acquitted of complicity in allowing night after night the Dublin boats to sail thus surcharged with densely packed masses of suffering humanity.

“ We may go further. This transporting of paupers, with a recklessness which no grazier or drover would exhibit in the case of cattle, is part of a great national neglect of duty. The death of the two paupers on board the *Duchess of Kent*, like the bone-breaking and eating of unclean flesh in the Andover Union, is only one of those appalling incidents which recur at too frequent intervals to remind us, of the easier classes, how apt we are to forget our poorer brethren. It is not inhumanity or covetousness among the proprietary classes, but a forgetfulness scarcely less culpable, that gives occasion to such suffering. It is not enough that rates be levied, and workhouses built, and overseers appointed to relieve the poor with due discretion. All this is the mere machinery of charity-administration; and machinery, left to work of itself, is too iron a thing to subject frail humanity to. It is the duty of the rich, and the independent of moderate circumstances, to watch strictly their ministers of charity, and see that the wants of the poor are cared for in a spirit of humanity. In a numerous and complicated popula-

tion, like that of Great Britain, individual charity is unavailing: there must be a public organized system for its administration. But the establishment of such a system only alters the mode in which Christianity requires us to discharge the duty of charity. In small and simple communities those who have the means ought to give alms; in multitudinously peopled empires they ought to keep a jealous watch upon the working of the machinery for administering public charity, and take care that the poor are treated as brethren."

And in truth the boasted humanity of England, and its exertions for the emancipation of slaves, earn her no credit with foreign nations, for they say benevolence has not been the moving power which produced these actions, but self interest; for no humane nation could set so little value upon life and health. Compare the remuneration of medical men,—compare the rewards offered to those whose efforts are directed to the restoration of bodily health and the preservation of life,—compare their rewards, I say, with those conferred upon the professors of the law, or the ministers of religion,—and they will be found comparatively insignificant. What government would venture to proclaim that five or six hundred barristers of great skill in their profession,—of great learning in the law,—were required for several months in different parts of the country, and were expected to perform the onerous duties required, at a remuneration of five shillings a day. Such a proposal would shake any government to its foundations, and would excite such an outcry within the walls of St. Stephen's as would confound and terrify any Ministers. But, in truth, the English Government has of late been pursuing systematically a line of conduct tending to depreciate the medical profession in the eyes of the public. They have abolished the office of Physician-General and State Physician; that of Surgeon-General or of State-Surgeon no longer exists; and no honour or reward from Government awaits the civil practitioner of medicine in Ireland.

I have already observed that the *Evening Post* accuses the promoters of this remonstrance of having been animated by political motives; an accusation which the Editor must, on cool reflection perceive was ungrounded. But let the Government beware of forcing the profession into an attitude hostile to British connexion; let them persevere in the course they have adopted, of withdrawing all rewards from the profession in Ireland; let them, as they have recently done, add insult to injury, and they may, perhaps, succeed in reconciling the political differences of opinion which exist between the 1160 gentlemen who signed the remonstrance, and may force them all to agree

in thinking that a better form of legislature for Ireland might be devised than that which has been hitherto so successful in degrading the medical profession.

The Board of Health have published the following Tariff, in which they say the various salaries are given in addition to any permanent salary which the fortunate medical attendant may possess.

“ Remuneration to Medical Officers.

“ 1. For attendance on temporary fever hospital, established within the town or district where the medical officer resides, in addition to any permanent salary he may receive as medical officer of any existing institution, 5s. per day, or £91 5s. per annum.

“ 2. For attendance on dispensaries, under similar circumstances, 5s. per day, or £91 5s. per annum.

“ 3. For attendance on fever hospital and dispensary together, under similar circumstances, 10s. per day, or £182 10s. per annum.

“ 4. For attendance on fever hospital, where medical officer is sent to distant district, one guinea per day, or £383 5s. per annum.

“ 5. For attendance on fever hospital and dispensary, under similar circumstances, two guineas per day, or £766 10s. per annum.

“ 6. For medical inspection, under direction of Board of Health, two guineas per day, and travelling expenses.

“ Separate provision is made for compounding and dispensing medicines.”

We have already, in common with 1160 Irish practitioners, expressed our opinion with regard to this 5s. per day ; the Board of Health has, however, in the document alluded to, endeavoured to impress the Public with the belief that this remuneration is merely in addition to some permanent salary which the medical attendant is supposed to be receiving for public medical service. Now with as much right might it have been published in this authorized manifesto: “in addition to any permanent” vested interest, patrimonial inheritance, or private practice, which such an individual might have been possessed of. But the insinuation is totally fallacious, because the appointments which have been made have been often irrespective of the circumstance of the physician or surgeon so appointed being an officer to any institution.

Another fallacy in this first item to which I would draw attention, is the statement of the salary being so much per annum, and that by a temporary board, for temporary attendance under a temporary Act, which cannot by any means continue in operation for a year; and which appointment may not be

for a month, or even for a week. It is unfortunate for this "per annum" subterfuge, that the Act does not extend its operation through the next year, as the Board of Health might, in that case, it being leap year, dilate their boasted stipend to the sum of £91 10s.

The fourth item appears to me, and has proved in its working, to be the most iniquitous of all. A medical officer of an infirmary or dispensary is required to attend a fever hospital or dispensary recently set up in his vicinity, for a remuneration of 5s. per diem, "in addition to any permanent salary;" for this paltry sum he is expected to perform duties which must necessarily interfere to a great extent with his private practice, which may oblige him to neglect other patients, which may even endanger his life; and should he hesitate, the threat is held over his head to send down to the same street it may be, some tyro, some protégé of a Commissioner, at a salary of a guinea a day, "£383 5s. per annum," as the Board take pains to calculate for us; or if this fortunate youth get both a dispensary and hospital, he has "two guineas a day, or £766 10s. per annum," to enable him to dispossess his refractory predecessor.

With one more observation I shall dismiss this document. Temporary as may appear to be this medical tariff, there can be no doubt that its effects are intended to be of a more permanent nature; indeed the addition of Mr. Twistleton to the Board of Health is conclusive as to the intentions of Government on this head, and therefore I take leave to warn the medical profession in Ireland to be cautious as to what remuneration, even of a temporary nature, they receive; for they may rest convinced that the Poor Law Commissioners will very soon take advantage of the ground thus pioneered for them by the Board of Health. By the amended Poor Law Act for Ireland, passed in this session, boards of guardians may be displaced, paid officers appointed in their stead, fever hospitals may be erected, dispensaries founded, and medical attendants appointed, their duties regulated, and their salaries fixed, by the sole and arbitrary will of the Commissioners; and, under such circumstances, our Irish brethren cannot be too wary in permitting an estimate to be affixed to their services.

It is constantly repeated that the fact of many medical men accepting the five shilling remuneration is a justification of the Board of Health. I cannot, nor will any just man think so; for the real degrader of the profession is here less the man who takes than the man who offers. Nor will it hereafter redound to the honour of the Board of Health that they lent themselves to the

system of presuming on the necessities of a poor but honourable profession, and aided the Government in the attempt.

But, Sir, it may be asked, what was the Board of Health to do? Was it in the power of that Board to persuade or force the Government into granting a more liberal remuneration to those employed in the dangerous service of attending fever hospitals? In my humble opinion, the Board of Health would have found it an easy task to accomplish this desirable object. Who can suppose that the Lords of the Treasury would for a moment hesitate to award a becoming scale of salaries to medical men, when they were so liberal in paying the far more numerous staff of officials employed by the Board of Works. If the Board of Health had referred to the salaries given to physicians during the prevalence of cholera in 1832—a mode of proceeding the propriety of which I have already adverted to—if they had called on Dr. Barker to supply them with a list of the physicians then employed by the Board of Health, to which he was Secretary, and the amount of the salaries they received; there can be no doubt that the result would have been altogether different: but the Board of Health did no such thing,—they evinced no anxiety, at all events they displayed no diligence, in making researches on the subject of precedents, for they seem to have found none but those favourable to their pernicious tariff; they overlooked the precedents of 1832,—they discovered and praised those of 1817 and 1826. Had the Board found, contrary to all probability, that the Government was unwilling to be guided by their advice in the adoption of a liberal and just scale of remuneration, then, I say it without hesitation, they should have instantly resigned. If they had manfully taken such a course they would have gained credit with all honest men, and the public voice would have sustained them. Had they then evinced their sympathy with the profession, no underlings could have imagined that they were doing a good and acceptable piece of service in propagating the rumour, that if the medical men of Ireland refused the proffered stipend, the Government would dispense with their services altogether, and supply their place with a cohort of half-pay army and navy surgeons; a report at one time so rife as to excite observation in the House of Commons. But another report of a much more serious nature has been spread, namely, that no medical man who signed the memorial is to expect favour or countenance from the Government. This is a grave matter, and the more so, because *its* origin, *its* propagation, cannot be traced to subordinates of mean authority having no connexion with official persons. It is a fact, for the accuracy

of which I can vouch, that this report was used as an argument to dissuade physicians from signing the remonstrance. I am persuaded that this was done without the knowledge of the Government; and I am confident that the Earl of Clarendon will never countenance a system which seeks not only to grind down the profession to the level of the lowest mechanic, but threatens with civil disqualification any individual who dares to raise his voice in defence of what he conceives to be his just rights; nor shall I be readily induced to believe that the members of a liberal Ministry could have sanctioned the attempts made, both in this city and in London, to prevent the publication in the Journals of the arguments of the aggrieved remonstrants. I cannot trust myself further on this particular part of the subject; and shall, therefore, conclude by thanking the Editors of the English and Irish papers and periodicals, for refusing to exclude questions, relative to the interests of the medical profession, from the benefits of free and open discussion.

But I find, Sir, that I have trespassed on your patience, and have occupied so much of your valuable space, that I must defer the further discussion of this important question until your next Number, when, having disposed of the general considerations in my present letter, I hope to enter upon the practical details and actual working of the five shilling principle and machinery, and thus approach the body of our subject more closely.

I have the honour to remain, Sir,
Your obedient Servant,
ROBERT JAMES GRAVES.

POSTSCRIPT.

October 6th.

The following announcement appeared in the Dublin Evening Post of October 2nd:

“ FREE GRANT FOR FEVER EXPENSES.

“ We have extreme gratification in announcing that the Lords of the Treasury have authorized the Relief Commissioners to make a free grant of the entire amount advanced to the relief committees, under the 10 Vic. c. 22, for fever expenses in Ireland. This, certainly, is a great boon, and will prove a seasonable relief to the ratepayers throughout Ireland. In the North Dublin Union alone the amount expended for fever was upwards of £6000.”

I certainly agree with the Editor that *this is a great boon*, but I cannot help thinking that this free grant would have been much more useful had it been made at the commencement of the epidemic, for it would then have prevented the indecision and calamitous delay which occasioned such heartrending scenes of misery, and such lamentable loss of life.

This boon, too, if granted at any earlier period, must have been received as an act of spontaneous benevolence, and voluntary national justice, and no one could have questioned either the motives of the Government or the prudence of the gift. Now, however, the case is widely different, and many will ascribe this tardy act of mere justice, to the chastisement which the Government and the Board of Health have received from the public journals in Great Britain and France; in truth Ireland will thank the Editors of the *Lancet* and the *Journal des Debats* for this *free grant*, rather than the Lords of the Treasury. It is pleasing, however, to find that their Lordships are not composed of such inexorable materials, as to be quite incapable of changing a resolution once formed, and their capability of arriving, though slowly, at a right conclusion, can leave no doubt on the mind of any one that they would have long since yielded on the question of the remuneration to be granted to medical men, if the Board of Health had only pressed it with proper energy.

I shall conclude by stating the curious fact that the Commission granted by Government for investigating the nature, causes, and mode of preventing the potato disease, cost the nation something more than *nineteen thousand pounds!* This sum is sufficient to pay ninety-five physicians a guinea a day each for six months. Homer says,

Ἴατρος γὰρ ἀνὴρ πολλῶν ἀνταξίος ἀλλῶν.

A wise physician skilled our wounds to heal,
Is more than armies to the public weal.

The times are greatly altered since the *Iliad* was composed, for now one *potato commissioner* is more valuable than many physicians! I expect soon to hear that my friend Sir Robert Kane has succeeded in the process of self-analysis, so as to eliminate and get rid of the M. D. element from himself, as being the most unprofitable portion of his composition.

INDEX

TO THE FOURTH VOLUME.

	Page.
ABDOMEN, on wounds and injuries of, by Mr. G. J. Guthrie. <i>Rev.</i>	177
Abortion, on the causes and treatment of, by Mr. J. Whitehead. <i>Rev.</i>	445
Air passages, on the diseases of the, by H. Green, M.D. <i>Rev.</i>	437
Alderson, J., M.D., on diseases of the stomach and alimentary canal. <i>Rev.</i>	206
Aldridge, J., M.D., on the comparative nutritive and pecuniary values of cooked food, and its chemical and physiological laws. <i>Rev.</i>	146
Alimentary canal, on diseases of the, by J. Alderson, M.D. <i>Rev.</i>	206
Amaurosis produced by encephaloid disease, case of, by Mr. J. Dalrymple,	481
Anatomy, human, hand-book of, by Dr. A. Von Behr. <i>Rev.</i>	184
——— of man, the physiological, by R. B. Todd, M.D., and W. Bowman, F.R.S. <i>Rev.</i>	174
——— the Dublin Dissector, or System of Practical, by Robert Harrison, M.D. <i>Rev.</i>	466
Aneurism, case of popliteal, cured by compression, by Mr. J. W. Cusack,	239
Antiseptic, Sir William Burnett's patent. <i>Rev.</i>	476
Aortic valve, case of vegetations on, by Dr. Corrigan, . . .	235
Arteries, on wounds and injuries of, by Mr. G. J. Guthrie. <i>Rev.</i>	177
Artery, case of irregularity of femoral, by Mr. H. Thompson,	251
Aural surgery, contributions to, Part III., by Mr. Wilde, . .	372
Auriculo-ventricular opening, case of contraction of, by Dr. Corrigan,	235
Auscultation, on the use of in labour, by Dr. M'Clintock, .	34
BATTERSBY, F., M.B., on pleuritis and empyema in children,	348
Beatty, T. E., M.D., cases of retroflexion of the uterus, by, .	296
Behr, Dr. A. Von, Hand-book of Human Anatomy, by. <i>Rev.</i>	184

	Page.
Bilious disorders, on, by G. C. Child, M. D. <i>Rev.</i>	206
Biography of John Oliver Curran, M. B., <i>with a portrait</i> , . .	500
————— James Houghton, M. D.,	511
Birkett, Mr. J., translation of Dr. A. Von Behr's Hand-book of Human Anatomy, by. <i>Rev.</i>	184
Bladder, case of inflammation of, by Dr. Hutton,	234
Blood-vessels, on the structure, diseases, and injuries of the, by Mr. E. Crisp. <i>Rev.</i>	427
Bones, cartilaginous degeneration of, case of, by Dr. O'Ferrall,	236
Bowman, Mr. W., and Dr. R. Todd, on the physiological ana- tomy and physiology of man. <i>Rev.</i>	174
Brain, Mr. S. Solly on the human. <i>Rev.</i>	453
Bronchial disease, on, by Sir Charles Scudamore, M. D. <i>Rev.</i>	433
Bronchitis, on, by H. Green, M. D. <i>Rev.</i>	437
Burnett, Sir William, report on disinfecting fluid. <i>Rev.</i> . .	476
————— antiseptic patent. <i>Rev.</i>	476
 CARRIES of the superior cervical vertebræ, case of, by Dr. Lees,	232
Cartilaginous degeneration of bones, case of, by Dr. O'Ferrall,	236
Chemical laws for the beneficial use of diet, by J. Aldridge, M. D. <i>Rev.</i>	146
Child, G. C., M. D., on indigestion and bilious disorders, with notes on diet. <i>Rev.</i>	206
Cholera, epidemic, on, by R. H. Kennedy, M. D. <i>Rev.</i> . .	193
Colles, Mr. W., cases of injurious effects following the use of rye as food, by,	243
————— observations upon urinary fistula,	57
Consumption, pulmonary, on, and the places chosen for resi- dence of invalids, by Sir Charles Scudamore, M. D. <i>Rev.</i>	433
Cook, Robert, notice of, by R. R. Madden, M. D.,	254
Corrigan, Dr., cases of endocarditis, vegetations on the aortic and mitral valves, and contraction of left auriculo-ventri- cular opening,	235
Crisp, Mr. E., on the structure, diseases, and injuries of the blood-vessels, with statistical deductions. <i>Rev.</i>	427
Curran, J. O., M. B., observations on scurvy, by,	83
————— biography of, <i>with a portrait</i> ,	500
Cusack, J. W., M. D., on the mortality of medical practition- ers from fever in Ireland,	134
————— case of popliteal aneurism cured by compres- sion, by,	239
 DALRYMPLE, Mr. J., case of encephaloid disease producing amaurosis, by,	481
Diet, notes on, by G. C. Child, M. D. <i>Rev.</i>	206
Diet and regimen, on, by W. H. Robertson, M. D. <i>Rev.</i> . .	206
Diseases of the human body, on the nature and treatment of, by E. J. Seymour, M. D. <i>Rev.</i>	151
————— of the stomach and alimentary canal, on, by J. Alder- son, M. D. <i>Rev.</i>	206

	Page.
Disinfecting fluid, Ledoyen's, report on. <i>Rev.</i>	161
————— report on Sir William Burnett's. <i>Rev.</i>	476
————— observations on Calvert's, by Mr. William Glass. <i>Rev.</i>	476
Dissector, the Dublin. <i>Rev.</i>	466
Duncan, J. F., M. D., on the propriety of classifying whooping-cough among the exanthemata, with a new theory of that disease,	72
Dyspepsia, on, by J. B. Steward, M. D. <i>Rev.</i>	206
————— on, by J. Alderson, M. D. <i>Rev.</i>	206
————— on, by G. C. Chaplin, M. D. <i>Rev.</i>	206
————— on, by W. H. Robertson, M. D. <i>Rev.</i>	206
EAR, on inflammatory affections of the middle, by Mr. Wilde,	372
Empyema, case of pneumothorax with, by J. M. Neligan, M.D.,	247
————— on, in children, by F. Battersby, M. B.,	348
Encephaloid disease producing amaurosis, case of, by Mr. J. Dalrymple,	481
Endocarditis, case of, by Dr. Corrigan,	235
Epidemic cholera, on, by R. H. Kennedy, M. D. <i>Rev.</i>	193
FALLOON, Mr. E. L., case of extirpation of superior maxilla for tumour, by,	488
FAMINE and fever, on the connexion between, by H. Kennedy, M. B. <i>Rev.</i>	150
Femoral artery, case of irregularity of, with fracture of femur from necrosis, by Mr. H. Thompson,	251
Femur, fracture of, the use of the seton in, by Mr. F. Rynd,	273
Fever and famine, on the connexion between, by H. Kennedy, M. B. <i>Rev.</i>	150
———— on the mortality of medical practitioners from, in Ireland, by Mr. J. W. Cusack, and W. Stokes, M. D.,	134
Fibula, case of resection of portions of, to remove deformity, by Mr. F. Rynd,	273
Finaghty, Father James, notice of, by R. R. Madden, M. D.,	254
Fistula, observations upon urinary, by Mr. W. Colles,	57
Food, on the preparation of for the labourer, by Sir H. Marsh, Bart. <i>Rev.</i>	146
———— on the comparative nutritive values of cooked, by J. Aldridge, M.D. <i>Rev.</i>	146
———— report from Central Board of Health on the administration of. <i>Rev.</i>	146
Fracture of the femur from necrosis, case of, by Mr. H. Thompson,	251
Fractures, on the application of setons in ununited, by Mr. F. Rynd,	273
GLAND, lachrymal, case of removal of, by Mr. J. O. Pemberton,	246
———— labial, case of enlargement of the, by Mr. Wilde,	241

	Page.
Glass, Mr. W., observations on Calvert's disinfecting fluid. <i>Rev.</i>	476
Graves, R. J., M. D., Letter relative to the Proceedings of the Central Board of Health of Ireland, by,	513
Greatrakes, Valentine, notice of, by R. R. Madden, M. D., . .	254
Green, H., M. D., on diseases of the air passages, and the patho- logy, causes, and treatment of bronchitis, chronic laryn- gitis, clergyman's sore throat, &c., by. <i>Rev.</i>	437
Guthrie, Mr. G. J., lectures on surgery, by. <i>Rev.</i>	177
 HAMILTON, Mr. J., communications from respecting Swift's skull,	 6
Harrison, Robert, M. D., The Dublin Dissector, or System of Practical Anatomy, by. <i>Rev.</i>	466
Houghton, James, M. D., biography of,	511
Health, report from Central Board of, on the administration of food. <i>Rev.</i>	146
——— Board of, for Ireland, Letter relative to the Proceedings of, by R. J. Graves, M. D.,	513
Hindu system of medicine, on the, by T. A. Wise, M. D. <i>Rev.</i>	198
Hooping-cough, on the propriety of classifying among the ex- anthemata, with a new theory of, by J. F. Duncan, M. D.,	72
Hughes, Mr. J. S., case of unreduced dislocation of radius and ulna, by,	497
Hunt, Mr. F., on diseases of the skin. <i>Rev.</i>	156
Hutton, Dr., case of ramollissement of medulla spinalis, para- plegia, retention of urine, inflammation of bladder and kidney,	233
 ILLUSTRIOUS Physicians and Surgeons in Ireland, No. V., J. O. Curran, M. B.,	 500
Indigestion, on, by G. C. Child, M. D. <i>Rev.</i>	206
Injuries of arteries, on, by Mr. G. J. Guthrie. <i>Rev.</i>	177
——— of abdomen, on, by Mr. G. J. Guthrie. <i>Rev.</i>	177
——— of pelvis, on, by Mr. G. J. Guthrie. <i>Rev.</i>	177
Ireland, on the mortality of medical practitioners in, from fever, by Mr. J. W. Cusack, and Wm. Stokes, M. D., . .	134
——— Board of Health of, Letter relative to the Proceedings of the, by R. J. Graves, M. D.,	513
Irish mesmerists, notice of, by R. R. Madden, M. D.,	254
 KENNEDY, Henry, M. B., on the connexion between famine and fever. <i>Rev.</i>	 150
——— R. H., M. D., on epidemic cholera. <i>Rev.</i>	193
Kidney, case of inflammation of, by Dr. Hutton,	234
 LABIAL glands, on enlargement of the, by Mr. Wilde,	241
Labour, on the use of auscultation in, by Dr. M'Clintock, . .	34
Lachrymal glands, case of removal of, by Mr. J. O. Pemberton,	246
Laryngeal disease, on, by Sir Charles Scudamore, M. D. <i>Rev.</i>	433
Laryngitis, on chronic, by H. Green, M. D. <i>Rev.</i>	437

Ledoyen's disinfecting fluid, report on. <i>Rev.</i>	161
Lee, Mr. T. S., on tumours of the uterus. <i>Rev.</i>	188
Leeper, W., M. D., Report on the pathology of tubercle, by, .	213
Lees, Dr., case of caries of vertebræ; destruction of the body of the axis, paraplegia, and retention of urine,	232
Leucorrhœal affections, on, by Mr. J. Whitehead. <i>Rev.</i> . .	445
Lithotrity, case of, by Mr. J. Smyly,	250
MADDEN, R. R., M. D., notice of Irish mesmerists, by, . . .	254
Marsh, Sir H., Bart., on the preparation of food for the la- bourer. <i>Rev.</i>	146
Materia medica and therapeutics, manual of, by F. Royle, M. D. <i>Rev.</i>	444
Maxilla, superior, case of extirpation of, for tumour, by Mr. E. L. Falloon,	488
M'Clintock, A. H., M. D., on the use of auscultation in la- bours,	34
Medical practitioners in Ireland, on the mortality of, from fever, by Mr. J. W. Cusack, and W. Stokes, M. D., . . .	134
Medicine, on the Hindu system of, by G. A. Wise, M. D. <i>Rev.</i>	198
Menstruation, on the diseases of, by Mr. J. Whitehead. <i>Rev.</i>	445
Mesmerists, Irish, notice of, by R. R. Madden, M. D., . . .	254
Midwifery, contributions to, No. 6, by T. E. Beatty, M. D., .	296
Mitral valves, case of vegetations on, by Dr. Corrigan, . .	235
Myringitis and tympanitis, acute, case of, by Mr. Wilde, . .	408
NECROSIS, case of fracture of femur from, by Mr. H. Thompson,	251
Neligan, J. M., M. D., case of pneumothorax with empyema, .	247
———— cases of sea-scurvy, by,	492
O'FERRALL, Dr., case of cartilaginous degeneration of the bones, by,	236
———— Dr., on pendulous tumours, with cases and illus- trations,	305
Osteosarcoma, case of at the base of the skull, by Dr. R. W. Smith,	236
PARAPLEGIA and retention of urine, case of, by Dr. Lees, . .	232
———— retention of urine and inflammation of bladder and kidney, case of, by Dr. Hutton,	233
Patella, use of the seton in fracture of the, by Mr. F. Rynd, .	283
Pathology of diseases of the skin, by Mr. T. Hunt. <i>Rev.</i> . .	156
———— of tubercle, Report on, by W. Leeper, M. D., . . .	213
Pelvis, on wounds and injuries of the, by Mr. G. J. Guthrie. <i>Rev.</i>	177
Pemberton, Mr. J. O., case of removal of lachrymal gland, by,	246
Physiological anatomy of man, on the, by R. B. Todd, M. D., and Mr. W. Bowman. <i>Rev.</i>	174
Pleuritis, on, in children, by F. Battersby, M. B.,	348

	Page.
Pneumothorax, case of with empyema, by J. M. Neligan, M. D.,	247
Popliteal aneurism, case of cured by compression, by Mr. J. W. Cusack,	239
Pulmonary consumption, on, by Sir C. Scudamore, M. D. <i>Rev.</i>	433
 RADIUS, case of unreduced dislocation of ulna and, by Mr. J. S. Hughes,	497
Ramollissement of medulla spinalis, case of, by Dr. Hutton, .	233
Regimen, on, by W. H. Robertson, M. D. <i>Rev.</i>	206
Rheumatic inflammation of the membrane and cavity of the tympanum, with periostitis, polypus, &c., by Mr. Wilde, .	419
Robertson, W. H., M. D., on diet and regimen. <i>Rev.</i>	206
Royle, J. F., M. D., manual of materia medica and therapeutics, by. <i>Rev.</i>	444
Rye, cases of injurious effects following the use of, by Mr. W. Colles,	243
Rynd, Mr. F., on the use of the seton in ununited fractures, with cases; also a case of resection of portions of the tibia and fibula to remove deformity,	273
 SCUDAMORE, Sir C., M. D., on pulmonary consumption, bronchial and laryngeal disease; with remarks on the places chosen for the residence of invalids, by. <i>Rev.</i>	433
Scurvy, observations upon, by J. O. Curran, M. B.,	83
Sea-scurvy, cases of, by J. M. Neligan, M. D.	492
Seton, on the use of, in cases of ununited fractures, by Mr. F. Rynd,	273
Seymour, E. J., M. D., on the nature and treatment of several severe diseases of the human body. <i>Rev.</i>	151
Skin, on diseases of the, by Mr. T. Hunt. <i>Rev.</i>	156
Smith, Dr. R. W., case of osteosarcoma at base of skull, by, .	236
Smith, Dr. Southwood, report on Ledoyen's disinfecting fluid, by. <i>Rev.</i>	161
Smyly, Mr. J., case of lithotritry by,	250
Solly, Mr. S., on the human brain. <i>Rev.</i>	453
Stella, some particulars respecting, with engraving of cranium, by Mr. Wilde,	1
Sterility, on the causes and treatment of, by Mr. J. Whitehead. <i>Rev.</i>	445
Steward, J. B., on dyspepsia. <i>Rev.</i>	206
Stokes, William, M. D., on the mortality of medical practitioners from fever in Ireland.	134
Stomach, on diseases of the, by J. Alderson, M. D. <i>Rev.</i> . . .	206
St. Patrick's Hospital, notice of, by Mr. Wilde.	1
Sullivan, Mr. E. W., case of pneumothorax with empyema, reported by,	247
Surgery, lectures on, by Mr. G. J. Guthrie. <i>Rev.</i>	177
Swift, some particulars respecting his disease, with engraving of cranium, by Mr. Wilde,	1

THERAPEUTICS, manual of, and materia medica, by J. F. Royle, M. D. <i>Rev.</i>	444
Thompson, Mr. H., case of irregularity of the femoral artery; with fracture of the femur from necrosis, by,	251
Tibia, case of resection of, to remove deformity, by Mr. F. Rynd,	287
Todd, R. B., M. D., and Mr. W. Bowman, on the physiological anatomy and physiology of man. <i>Rev.</i>	174
Toynbee, Mr., report on Ledoyen's disinfecting fluid, by. <i>Rev.</i>	161
Tubercle, Report on the pathology of, by W. Leeper, M. D., .	213
Tumours, on pendulous, with cases and illustrations, by J. M. O'Ferrall, M. D.	305
Tumour, case of extirpation of superior maxilla for, by Mr. E. L. Falloon,	488
——— of the uterus, on, by Mr. T. F. Lee. <i>Rev.</i>	188
Tympani, on inflammatory affections of the membrana, by Mr. Wilde,	372
Tympanitis and acute myringitis, case of, by Mr. Wilde, . .	408
Tympanum, rheumatic inflammation of, by Mr. Wilde, . .	419
ULNA, case of unreduced dislocation of radius and, by Mr. J. S. Hughes,	497
Urinary fistula, observations upon, by Mr. William Colles, .	57
Uterus, cases of retroflexion of the, by T. E. Beatty, M. D., .	296
——— on the physiological and morbid conditions of the, by Mr. J. Whitehead, <i>Rev.</i>	445
——— on tumours of the, by Mr. T. S. Lee. <i>Rev.</i>	188
VERTEBRÆ, case of caries of the, by Dr. Lees,	232
WHITEHEAD, Mr. J., on abortion and sterility, and the physiological and morbid conditions of the uterus; leucorrhœal affections, and the diseases of menstruation; by. <i>Rev.</i> .	445
Wilde, Mr., some particulars respecting Swift and Stella, with engravings of their crania, and notices of St. Patrick's hospital,	1
——— case of enlargement of the labial glands, by,	241
——— contributions to aural surgery. Part III. On inflammatory affections of the membrana tympani and middle ear, by,	372
Wilmot, Mr. S. G., case of popliteal aneurism cured by compression, reported by,	239
Wise, T. M., M. D., commentary on the Hindu system of medicine. <i>Rev.</i>	198
Wounds of abdomen, arteries, and pelvis, by Mr. G. J. Guthrie. <i>Rev.</i>	177





